



MOTOR UNION

INSURANCE CO. LTD.
All Classes of Insurance Transacted



10 ST. JAMES'S STREET, LONDON, S.W.1



*Best for all
occasions*

**STATE EXPRESS
555**

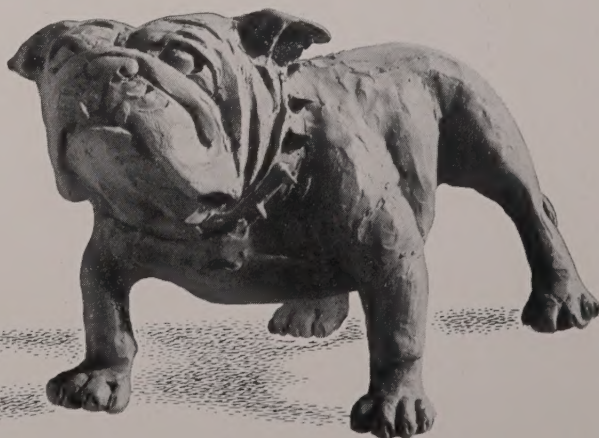
*The Best Cigarettes
in the World*



The House of STATE EXPRESS. 210 PICCADILLY, LONDON, W.1.

As British as . . .

British engineering bears the stamp of the British character. All over the world the electrical products of the G.E.C. are renowned for dependability because they are known to be British made. Nor could any organisation itself be more British than the G.E.C. It began in England. It pioneered electrical development and manufacturing in England. And it has extended its activities, made friends, and established associates throughout the world in the characteristic British way.



G.E.C.

THE GENERAL ELECTRIC COMPANY LIMITED OF ENGLAND

C151-C

England's pioneer electrical manufacturing organisation — and still her largest

Trouble in Northern Waters

The Background to the Fishing Disputes

by RICHARD SCOTT

What is the "open sea" where men of all nations may lawfully take fish? Many members of the public have recently learned with surprise that the answer to so important a question, affecting so large a part of our supplies of fish, is still in dispute. The Diplomatic Correspondent of the Manchester Guardian here explains how this problem has arisen and on what its solution depends

EVEN before the introduction of the steam trawler at the beginning of this century made it possible for British fishing fleets to seek their catches far afield in the northern waters around Iceland and northern Norway, international fishing rights and limitations in coastal waters had become a matter of controversy. In the past few years this problem has come to a head in two major disputes between Britain and Norway and Britain and Iceland. The dispute with Norway, which discussion and negotiation over a number of years had failed to settle, finally had to be submitted to the International Court at The Hague which gave its ruling, after nearly two years, just before Christmas 1951. The dispute with Iceland, which is directly related to the ruling of the International Court on the Norwegian case, has not been submitted to international arbitration and so far has remained a dispute as between the fishing industries of the two countries.

The dispute with Norway had its origins in the early years of this century. It was then, as I have said, that the introduction of steam trawlers made distant fishing possible. And the British fishing fleets had to go further and further afield in order to satisfy the growing demand for fish which resulted from the steadily rising population and higher standard of living of the masses in the United Kingdom. From 1909 British trawlers began fishing along the Finnmark coast, the most northerly part of Norway, and at the beginning of the thirties they began to appear further south off Vesterålen.

As far back as 1882 most of the nations primarily interested in the North Sea fisheries had entered into a convention which provided that fishing in coastal waters within a three-mile limit was exclusively reserved to the nationals of the coastal state. This convention also provided that in the case of bays a so-called base-line should be drawn across the bay "in the part nearest the entrance, at the first point where the width does not exceed

ten miles". The exclusive fishing limit off bays was then to be drawn three miles to seaward from this base-line. Partly because she objected to this ten-mile limit for bays and partly because she claimed a four-mile instead of a three-mile coastal limit Norway did not adhere to this convention of 1882. It was not, however, until 1935 that Norway defined exactly what coastal waters she claimed as her exclusive fishing zone.

Long before this, however, incidents began to occur between British trawlers fishing off the Norwegian coast and Norwegian coastal patrol vessels. British and other foreign trawlers were frequently arrested as a result of conflicting views as to the limits of the Norwegians' exclusive fishing zone. The difference of view arose not only over the Norwegian claim to a four-mile coastal limit, instead of the three-mile limit which was all that the British were at that time ready to recognize, but also over the manner in which the Norwegians drew this four-mile limit. Since international law recognizes the right of the nationals of any state to exclusive fishing rights in its own territorial waters this dispute over the four-mile limit claimed by the Norwegians in virtue of a decree of 1812 in fact amounted to a dispute over the extent of Norway's territorial waters.

In order to try and settle the dispute discussions between the two Governments took place in Oslo in 1924 and again in London in the following year. Though some progress was made, certain of the proposals made at this London conference were rejected by the Norwegian parliament and no agreement resulted. Nevertheless in the following years arrests of British trawlers by the Norwegians declined since each side exercised a certain moderation for some while in pressing its claims. In 1931, however, the Norwegians reverted to a stricter enforcement of their claims and arrests once more became fairly frequent. Two years later another attempt at negotiation was made without success. But again these negotiations



Picture Post Library

Norwegian fishing trawlers off the Lofoten Islands. Norway's claim to enlarge her territorial waters, upheld by the Hague Court in 1951, gave her exclusive rights over wide areas of open sea

resulted in greater moderation by both sides.

Then in the summer of 1935 Norway issued a Royal Decree which for the first time exactly defined the area in which she claimed exclusive fishing rights. It was this decree which formed the basis of the dispute which eventually was taken to the Hague Court for arbitration. The decree was strongly opposed by the British Government because of the manner in which the base-lines had been drawn and this was to be the chief burden of the British Government's complaint before the International Court to which it submitted the dispute in September 1949. The case had not been submitted earlier partly because further negotiations were attempted, partly because World War II intervened and partly because it was not until the winter season of 1948 that the Norwegian Government again began to enforce the 1935 decree with strictness.

The British Government dropped its opposition to the extension of Norway's territorial waters to four miles and simply sought to obtain a ruling from the International Court confirming that the base-lines which defined the zone of coastal waters reserved exclusively to the Norwegians should be drawn in accordance with the terms of the 1882 convention. The British claimed that the base-

line should be the line of low-water mark along the entire coast subject only to certain special provisions regarding bays, islands and historic waters. In virtue of the 1935 decree the Norwegians had drawn base-lines as straight lines connecting extreme points up to forty miles apart and consequently including within the prohibited zone large areas of open sea. Not only were the legal questions involved in this case extremely complicated but the machinery of the International Court is necessarily slow-moving. It was not until the end of 1951 that the Hague Court, after hearing all the evidence, finally gave its ruling. And its ruling was against the British case and in favour of the Norwegian case. The Court made it clear that it upheld the method of drawing base-lines adopted by the Norwegians in their 1935 decree because it had reached the conclusion that Norway had established its case that this method had become established and consolidated in the Norwegian system by constant and sufficiently long practice. The Court did not therefore make a general ruling that the method of drawing base-lines adopted by Norway should be regarded as the method which international law accepted as justified in all cases. Indeed its approval of this method applied only to the

specific case before it—that of Norway.

This point is of some importance because it was clearly as a direct result of the Court's ruling in the Norwegian case that the Government of Iceland, five months after the Court's decision was promulgated, decided to extend the fishery area around its coasts reserved exclusively to its own nationals. And in delimiting this area it adopted the Norwegian methods. Iceland extended her territorial waters from three miles to four and drew her base-lines from the extreme points around her coasts in straight lines. By this means she included within her prohibited zone Faxaflói and Breiðhíðjörður, the two vast bays on her western coast. At the same time the Icelandic Government put a temporary ban on fishing in this area—a measure which it claimed was essential for the conservation of the fisheries. This ban applied to Icelandic as well as to foreign fishing.

Britain has disputed this action by the Icelandic Government on three main grounds. First, because Norway's extension of her territorial waters from three miles to four had been accepted by the British for special historical reasons. This point had not been contested before the International Court and the Court had therefore not ruled on the issue. Consequently, it was not justifiable for the Govern-

ment of Iceland to adopt the four-mile limit because this had been sanctioned by the Hague Court in the case of Norway. The historical reasons which justified the Norwegian action did not, in the British view, apply in the Icelandic Government's case. Secondly, the British Government felt that the manner in which the Icelandic Government had drawn its new base-lines was in excess of the methods sanctioned by the Court in the Norwegian case. Thirdly, while not disputing that certain of the Icelandic fishing grounds had been over-fished and were in need of conservation measures, the British did not accept that the Icelandic Government could unilaterally impose such measures outside its territorial waters. It is also claimed that large areas of the waters now prohibited are not breeding grounds and that therefore the conservation argument cannot be applied. The British fishing industry agreed to take part in discussions with representatives of the Icelandic industry in accordance with the provisions of the 1946 North Seas Fisheries Convention but this offer has not been accepted. Under the terms of the convention an international permanent commission was to be set up to maintain a constant survey of the stocks on the various fishing grounds. Because certain states have still not ratified the convention





Press



(Above) Shooting the trawl from a British vessel. Exclusion from coastal waters off Norway and Iceland, as recently extended by these two countries, deprives British owners of valuable fishing. Modern trawlers, fitted with up-to-date equipment, help to overcome the important resulting loss. (Left) The 674-ton Red Rose with a speed of 12 knots and capacity for 200 tons of fish

this commission has not yet been set up.

The British Trawlers' Federation have expressed the fear that if other countries followed the example of Iceland and banned fishing in large areas around their coasts in order to conserve fish a position would soon be reached which might result in the eventual collapse of the British fishing industry. The federation has estimated that the Icelandic Government's action has banned between fifty and sixty recognized fishing grounds within the 5000 square miles that have been cut off and that this will deprive British trawlers of some 500,000 cwt of fish a year. They forecast that this will mean that British trawlers will have to go further afield to maintain their catches and that this will result in an increase in the cost of fish to the British consumer. During the last North Sea fishing season—the eight months from the beginning of September 1951 to the end of April 1952—the total quantity of British taking according to the Ministry of Agriculture and Fisheries was 7,486,355 cwt. The total landed by British trawlers from Icelandic waters was 1,151,837 cwt and the total landed by Icelandic trawlers was 735,630 cwt; together

constituting about 25 per cent of the total British taking. For the month of April 1952 alone the fish landed by British trawlers from Icelandic waters was as high as 47 per cent of the total British taking. It is clear therefore that the effect of the Icelandic prohibition on British supplies of fish, while varying from month to month, is in the aggregate of great importance to British fishermen and consumers alike.

The dispute with Iceland came to a head when, after exchanges between the two governments had failed to bring about a settlement, the British Trawlers' Federation decided early this autumn to retaliate by denying the landing facilities which they controlled to Icelandic trawlers arriving in Britain. The Icelandic fishing industry proceeded to establish a company at Grimsby to provide its own landing facilities. This action was followed by the announcement by the British Trawler Officers' Guild that if Icelandic trawlers landed and sold their catch at British ports British distant-water trawlers would go on strike. On November 17 two Icelandic fisheries experts came to London to explain to the representatives of the British

The mate of a well-equipped British trawler studying the cathode ray tube, which registers the depth of a shoal of fish. At the right is the "seagraph", which indicates the depth of the ocean





Grimsby Evening Telegraph

Unloading fish from the Icelandic trawler Jon Forseti at Grimsby in November 1952: this was the immediate cause of a strike of British distant-water trawlers in protest against Icelandic claims

fishing industry the technical reasons for the conservation of the Icelandic fishing grounds. The British representatives declared after the meeting that they had not been convinced by the Icelandic arguments and that no agreement had been reached. A week earlier, on November 14, it had become known that an Icelandic trawler, the first of the season, was on its way to Grimsby. So that the discussions between the representatives of the Icelandic and British industries might not be prejudiced the Icelandic Government arranged for this ship to be diverted to a German port. However, when it became clear that the discussions had failed, Iceland made it known that she intended to land her fish at British ports in spite of the threats of the British industry and on November 19 the *Jon Forseti* put into Grimsby and succeeded in disposing of her catch. The Grimsby Trawler Officers' Guild immediately called a strike of distant-water trawlers. As a result of discussions between the representatives of this guild and the fish merchants at Grimsby and Hull the latter agreed not to dispose of Icelandic fish and the trawler officers in consequence called off their strike.

The Government of Iceland has rejected the offer of the British Trawlers' Federation to negotiate with the Icelandic industry on

the ground that decisions taken by the Icelandic Government are not susceptible to revision by negotiation between the two industries. The British Government, on the other hand, points out that there is little purpose in submitting this case to the arbitration of the International Court not only because no decision could be expected for some two years but also because there is no sort of guarantee that, even if the Court's decision supported the Icelandic case, the British fishing industry would lift its ban on the handling of Icelandic fish. What clearly seems to be needed is to set up the permanent international commission recommended by the 1946 North Seas Fisheries Convention as soon as this Convention comes into force upon its ratification by Spain. Spain's ratification is expected before this article comes into print. Though the Icelandic Government has not hitherto favoured the submission of the dispute to the judgement of this international commission when it is set up, no other early and equitable solution seems to be in sight. There is no reason to suppose that the British fishing industry would not accept in good part the decisions and recommendations of this commission just as the British Government accepted the ruling of the Hague Court on the Norwegian case.

Politics and Apricots

by IAN STEPHENS

Last year Mr Stephens visited the remote valley of Hunza and Nagir, isolated by mountains, international frontiers and the Kashmir cease-fire line, which he describes as "a thing to weep over for an Englishman who loves both India and Pakistan". Such he proved himself during his long editorship of the Statesman, a newspaper published in Calcutta and Delhi



A. J. Thornton

I WAS full of happiness, and of gratitude for good fortune. For I had reached Aliabad, at the mouth of the Hunza-Nagir valley, in the Karakoram area of Central Asia, thereby fulfilling an ambition.

The landscape which I was in, and had passed through, was of extraordinary grandeur. It almost stunned. I had not conceived that such awe-inspiring, arid, soaring, heavenly magnitudes could exist. Even so eminent an authority as Shipton turns to the language of extremes when writing of this wonderful region. In his book *Mountains of Tartary* he describes Hunza as "the most spectacular country I have ever seen".

He goes on: "For 150 miles the caravan route follows along the great gorge of the Hunza river, through the very heart of the greatest concentration of high mountains in the world. The whole way the river is closely flanked by peaks more than 20,000 feet high. . . . A large part of the caravan road is carved out of the sheer sides of the gorge. . . . It is difficult to describe this fantastic principality without indulging in superlatives."

Shipton, however, apparently had not the good luck that was mine on two additional points: of entering the valley in the single week of the year when it is a sea of apricot-blossom; and of doing so amidst the bizarre politics of 1952, with Asian varieties of "iron curtain" both to north and south.

Let us first consider the politics, the iron curtains, for they make Shipton's term "fantastic" the more apt. Before 1947, when the British left India, the little principalities of

Hunza and Nagir (Nagir is much the less known) were feudatories of the great princely State of Kashmir. In the autumn of that year, however, after the Maharajah of Kashmir's decision to accede to the Indian Union rather than to Pakistan, there was widespread fighting in the State between the Indian Forces which had been flown up from Delhi and local or Pakistani volunteers. At an early stage the Mirs (chiefs) of Hunza and Nagir, whose subjects are overwhelmingly Muslim, 99 per cent I believe, together with the people of Gilgit and Astor further to the south, cast off allegiance to the Maharajah and undertook to join Pakistan.

Gilgit was several times bombed by the (then Royal) Indian Air Force; fins of some of the 500-pounders, in wooden mounts, now ornament the Political Agent's drawing room. But the land-fighting never swirled so far, and remote little Hunza and Nagir remained immune. As a result of the dispute, however, they forfeited all contact through the Indian Union with the world beyond, for the land route via Srinagar, the capital of Kashmir State, was blocked; and connection with Pakistan was achieved only by wireless and by what is perhaps the most precarious and dramatic air route in the world—I had to traverse it during the first part of my journey—which at about 12,000 feet follows the chasm of the Indus from near Peshawar or Rawalpindi to Gilgit amidst a fearful jumble of mountain scenery, flanked and dominated by the gigantic, 27,000-foot Nanga Parbat massif. There was no land route.

But northwards towards China communications were then open; and it is a curious anomaly that, even before 1947, more trade flowed between the Hunza-Nagir principalities and Yarkand or Kashgar, in Chinese Turkestan, over the lofty Mintaka and Kilik passes, than with Srinagar or the Indian plains to the south. For example by tradition they imported their rice from Kashgar, not from Srinagar. This fact helped them through a difficult period, when the structure of the new-made State of Pakistan was ill organized, and the haphazard air-supplies were menaced by Indian fighter-planes. The winter of 1950-51, however, brought dramatic new events, which resulted in those northward contacts with the outside world being blocked too. The Chinese Communists, overrunning Tibet and Sinkiang, reached the passes, established armed posts nearby, and stopped the transit of caravans.

These successive happenings, involving rupture of the old-established links both to north and south, have made the Gilgit Agency, of which Hunza and Nagir form part, virtually an island, and a besieged one at that. True, a long and devious new road usable by jeeps up the Kagan valley and over the high Babusar pass has recently been built; but owing to snow on the Babusar it is only open for a few months in summer, and was not so while I was there.

Thus though the Agency seems from the map to form an integral part of West Pakistan, at present it is for most of the year about as cut off from it as is East Bengal. Pakistan in fact is in one sense a remarkable example of extreme modernity in statehood; of a political structure enterprisingly held together by radio and aircraft, without which it could scarcely cohere.

Awareness of these various oddities of contemporary politics added to the already great interest of a visit to the Hunza-Nagir area. On the one hand, only about three days' march to the north, was the mysterious new menace of Chinese Communism established at the passes; on the other the Kashmir cease-fire line, as stiff a barrier as when first established at the armistice in 1949, a thing to weep over for an Englishman who loves both India and Pakistan, traversible only by special permission of U.N. headquarters in Rawalpindi or Srinagar, and in the presence of U.N. officers.

Now for the apricots. If you have not been warned—I was not—and if you happen to go to the Hunza-Nagir area during the particular few days in early April which good fortune

chose for me, the spectacle which faces you, as you emerge from the tremendous gorges below Hunza proper, and mount the last crest at Murtazabad, is scarcely credible: almost an entire valley floor, perhaps eighteen miles long by seven miles wide, billowing with fruit-blossom, nearly all of one kind, extraordinary in density, and wonderful in colour, mainly white or pink, but sometimes, too, a strange lavender-grey.

As this valley has already been gifted with almost every imaginable perfection of natural beauty, in colour and form and splendour of scale, this lovely addition, for some bewildered seconds, defies one's means of adjustment.

There had of course been fruit-trees in bloom further down, where the season was more forward: the shell-pink of apple, the creamy-white of pear, the deep rose-pink, almost magenta, of peach. And there had been other trees from which the petals had dropped, where little fruits were already setting amidst green foliage—apricots, as I afterwards realized; but in nothing like Hunza's profusion. At those lower altitudes, about 4000 feet in Gilgit, rather more in the 'oases' strung bead-like along the intervening gorges—Nomal, Chalt, Sikandarabad, Maiún—fruit-trees grow in orthodox fashion, singly, as blobs of isolated pretty colour gracing the landscape, or in compact orchards surrounded by little stone walls and the green of young wheat or rice; not as if lavishly spilt like pale mauve sugar over an entire countryside.

In all this upper Hunza-Nagir area between about 7000 and 9000 feet the apricot fulfils a remarkable role in the village economy. This explains its profusion, and the superb scenic effects consequently created. The other fruit-trees—pears, apples, peaches, mulberries, loquats, most of them still leafless and blossomless when I arrived—also grow up there, but planted in the normal way. You plant apricots however almost as you would plant potatoes. They are a main crop, and for reasons of climate and soil grow to perfection, yielding abundantly. Their uses are many. In summer you enjoy the ripe flesh of their fruit. At other seasons you eat this dried—and very good it can be. But more important is the kernel. This you crack between the teeth like a rather hard almond, or eat after it has been ground up as flour and made into cakes or country bread; from it an oil is also extracted. Experts say the kernel has exceptional food-value. It is also, as I can testify, very convenient to travel with. Being hard and smooth of surface, it does not readily break or get dirty; you just take a pocketful



All Ektachromes by the author

A side valley, which spills into the main Hunza–Nagir valley near Aliabad. A sprinkling of sunlit apricot trees is in bloom on the left, with terraced fields which sprawl down to the valley floor

and set off. For a while in Nagir I subsisted happily on nothing but apricot kernels and some raisins.

This factor in the local diet, and perhaps something in the water, may explain the people's good health and longevity, for which they are renowned. Medical services exist; at little dispensaries in the main villages vaccination was in progress during my stay, as safeguard against smallpox which had broken out down the valley, a usual affair in spring.

But many of the other diseases of the lower altitudes seem almost unknown; and if the visible proportion of healthy-looking ancients was a sign, the average expectation of life is very high. At Baltit, Hunza's little capital, beneath the palace perched romantically on its crag, I was introduced to a vigorous grey-beard, brisk of step and firm of handclasp, who, judging from his replies to questions about events in the history of Kashmir State, was 97. He looked about 65. The hardihood



A village and its fields poised high above the Hunza River—seen as a horizontal streak. The diagonal streak is the polo-ground; almost no village in Central Asia, the home of polo, lacks one

of the young Hunzawals on mountain expeditions is famous. During the Kashmir campaign of 1947-9 volunteers mainly from Hunza and Nagir achieved a raid in winter on Indian positions which was not thought feasible—by either side. Shipton, writing last August in this Magazine, said these men were “far superior as cragsmen” to the Sherpas; if trained for assaults on the great peaks, he considered they would undoubtedly become

“first-class climbers”.

And they seem by temperament a happy, tranquil people. The reputation for ferocity which they got under an ambitious former Mir, who caused them to attack most of their neighbours, making Hunza a word of terror throughout much of high Central Asia, still lingers—but I think misleadingly. It is out of character. They appear fundamentally different from Pathans, who, despite great



(Left) A schoolboy of Baltit, the capital of Hunza—cheerful, self-confident, dignified. He wears the usual Gilgiti cap of wool, and a long-sleeved white Gilgiti cloak, characterized by two handsome twirls of coloured embroidery around pendulous tassels on the chest. The back of such a cloak would be embroidered too, perhaps more lavishly. The more modern style of Gilgiti cloak however is usually without this pleasant decoration

(Right) The author was told he was the first Englishman to visit Nagir State since the British Raj ended in 1947, and this strong lad accompanied him as porter. "The hardihood of the young Hunzawals is famous". Part of the Hunza-Nagir track is too precipitous for use by pack-ponies. The season being spring, the young man adorns his white Gilgiti cap gaily with a sprig of apple-blossom





(Left) *The little palace of the Mir of Nagir, surrounded by leafless poplar trees, seen in the month of April across billowing apricot-blossom, white, pink, and in places a strange lavender-grey. Hunza lies to the right, behind the ridge, under the remote cloud-topped 24,000-foot snow-peak*

(Right) *A snow-fed irrigation channel, coursing pleasantly among the flowering apricots and tall poplar-boles near Nagir. Though shadowed in winter by huge mountains to southward, after the equinox Nagir gets plenty of sunshine*



Uncertain whether to be shy or not — two little schoolgirls after vaccination at a village dispensary. Their grown-up sister shrouds her face from the camera with Muslim modesty

charm, are by nature marauders. There is scarcely any crime in Hunza. An impression of gentleness and laughter, and of true pleasure as well as lively interest in the arrival of a stranger, is what I brought back from strolls in the villages. The children are enchanting: well mannered, friendly, beautiful, gay.

The two principalities are full of strange anomalies. Much of Nagir, which faces north, gets almost no sunshine in winter, except what is vexingly reflected from its rival's territory; the huge mass of mountain behind it to the south cuts off the direct rays. "But look!" exclaimed my guide, clutching my arm, as we stood at a point in the Nagir side valley. "There, through that gap!" He pointed north-westwards. "Even now the sun sets through it. In the summer", he went on triumphantly, "we get more sunshine than the Hunzawals!"

Nor are the contrasts confined to climatology. They extend for example to faith. Hunzawals, almost to a man, are Ismailis, followers of H.H. the Aga Khan; Nagirwals are Shias. The shining river, slicing the valley like a sword, divides the two sects, as dissimilar in their ways perhaps as Congregationalists and Catholics.

"I do wish those clouds would go away", exclaimed the Mir of Hunza one afternoon, regarding the gigantic shrouded mountaintops with a frown. We were on the little terrace beside the new palace at Karimabad. "The people are beginning to say it is my fault; we *must* have some sunshine to water the crops."

For a moment I felt dazed; sunshine to water the crops? That the more credulous among his people think he has some connection with the weather; that in January there



is a ceremonial spring sowing, when he puts seed mixed with some gold in a field near the old palace—these things I had heard. Then the explanation dawned.

"You mean that Pandit Nehru hasn't sent any bombers over these last few afternoons?"

He smiled. It was a little joke between us. On my first day there, startled by the crash of avalanches among the great peaks, so like high explosive in the still air, I had pleased him by remarking that the Kashmir war seemed to have started again, and asking where he kept his air-raid shelter.

He nodded and smiled: "Yes. Let's hope he sends lots tomorrow!"

And so it was. Soon after midday, under a cloudless sky of wonderful blue, a series of heavy detonations resounded from the icy summits. Grey skies in springtime in Hunza or Nagir may mean dangerous drought; but sunshine means avalanches, which of course mean melted snow, rushing torrents, and the tinkle of full irrigation channels coursing pleasantly through the green fields and among the blossoming apricots.



Kodachrome

During the week before Lent the villagers at Tepoztlán in the remote mountains of central Mexico celebrate the coming austerity by dressing in fantastic clothes and dancing in the plaza

Carnival at Tepoztlán

by MICHAEL SWAN

Photographs by
TANIA STANHAM



Kodachrome

THE village of Tepoztlán lies in one of the crumpled folds of the great area of mountain ranges forming the State of Morelos, in central Mexico. To the east runs the superb outline of the twin volcanoes, Popocatepetl, the "Smoking Mountain", and Ixtaccihuatl, the "Sleeping Maiden", which lies like a woman recumbent on her tomb. To the north, barely fifty miles away as the crow flies, are the skyscrapers of Mexico City; today you can drive from Mexico City to Tepoztlán in less than two hours, but until a few years ago there was no more than a rough mule-track across



Kodachrome

Decorated with beads, ostrich-feathers and bits of glass and perhaps the coloured photograph of a film-star, the highly ornamented head-dresses, "like great inverted lamp-shades", are the most conspicuous feature of the costumes



Kodachrome

Hairless Indian faces are hidden behind masks of brownish-red adorned with the mustachios and pointed beards of, probably, the conquistadores whose mannerisms and walk which amused the Mexicans over four centuries ago are aped in the dances

the arid mountains from Tepoztlán to the nearest town, Cuernavaca. Thus, geographically, Tepoztlán was isolated in its open valley, bounded on either side by sheer rock-faces whose rugged spires and fantastic crenellations give them the appearance of barbaric Gothic architecture. Few visitors ever came to the valley, but the people of the village learnt something of the outside world when they took their produce to the market at Cuernavaca. Occasionally one of the richer members of the community—*los Correctos* they are called—would send a son to be educated in Mexico City, so that he might give his native village the benefit of his education. The sense of tribe and tradition is so strong among Mexican Indians that few who had been educated in the city failed to return to the valley.

One result of Tepoztlán's isolation is that very little alien blood runs in the veins of its 2000 inhabitants. Cortes marched through the village in 1521 and one of his officers, Bernal Diaz, noted that there were many pretty women there; the *conquistadores* must have left their mark behind, but when they had gone the village was left without a Spanish garrison, and during the years that followed the only Spaniards who came to the valley were missionary friars. Tepoztlán was converted to Christianity when one of the friars proved that his strength was greater than that of the patron of the village, Tepoztecatl, the god of "mild drunkenness". His idol stood on a pyramid at the edge of the northern rock-face; the friar climbed to the pyramid and toppled the idol over the precipice, and the spot where it landed is still commemorated by a stone cross. At times, even today, lone figures will climb to the pyramid and sacrifice a fowl for some private benefit, and each year a dance-drama is performed to celebrate an ancient victory which had been gained by Tepoztecatl's intercession. Quite without any feeling of incongruity the day of this pagan festival begins with a "*chirimia*" on reed pipes, summoning all, from the roof of the church, to take part in the prayers and hymns before the coloured *santos* on the high altar.

It was this survival of past customs and ways of life which, twenty years ago, first aroused interest in Tepoztlán. Here was a perfectly preserved Aztec community, speaking Nahuatl, the language of the Mexican plateau, as its first language, Spanish as a second language. An American anthropologist, Robert Redfield, came to live in the village and made a survey of its traditions and beliefs

which he published in a fascinating book, *Tepoztlán: A Mexican Village*. Adventurous tourists who had read the book began to make the hard mule-back journey to the valley, but still the village remained untouched by civilization. Today, however, the new road has changed all, and at weekends Cadillacs and Póntiacs stand beneath the beech trees in the plaza, and Tepoztlán struggles to keep its identity under the curious gaze of American tourists—and Mexicans from Mexico City whose gaze is often just as curious. It is surprising that the village *has* kept its identity so immaculate—helped, certainly, by the quality of quiet detachment which you find among the Indians of the plateau. A bright new school faced with white stucco overlooks the plaza, juke-boxes blare the voice of Miss Betty Hutton or Mr Sinatra from the *cantinas*, whose outsides are decorated with red ovals beseeching all to drink Coca-Cola and Pepsi-Cola; a rickety old bus makes the journey to Cuernavaca twice a day, and some of the young men have a taste for highly coloured floral shirts. The surface is deceptive; in some adobe hut you may find a witch-doctress brewing mountain herbs for a love-potion, or telling a woman to measure her husband with ribbons and hang them on the image of the Virgin if she wishes to regain his love. There is a qualified doctor in the village and the younger people have been educated to have confidence in him, but the old ones still prefer to dispel the evil airs by arranging *chile* seeds in the form of a cross on the ground, or by making a figure of the evil agent out of copal from the mountain-side, and burning it in the fire.

In Tepoztlán, as in most of the towns of Mexico, the great *fiesta* of the year comes during the week before Lent when the village makes its farewell to meat—its "*carne vale*"—by dressing in fantastic clothes and dancing in the plaza. Each of the three main *barrios*, or sections, of the village contributes a team of dancers and a band; and it is traditional that the dancers—*Huehuenches* or *Chinelos* they are called—should largely be *los Correctos*. The poorer classes—*los Tontos* (literally, the "foolish ones", but the connotation is not as insulting as it seems)—are the chief celebrants in other, but lesser, fiestas. At three in the afternoon a gun is fired, rockets shoot into the air and, from the *atrio* before the church, come the *Chinelos*, in ragged, leaping groups behind each band. Each dancer wears a long, flowing gown of velvet or satin, loose from the shoulders down, all in pure blues, reds, greens or yellows; over

the face a mask of brownish-red is worn, with huge white, staring eyes and a long, tapering black beard and mustachios. The most extraordinary feature of the costume is a head-dress like a great inverted lampshade, on which most of the decoration is lavished—beads, coloured glass, embroideries, ostrich feathers and, perhaps, a coloured photograph of Miss Rita Hayworth, cut from a magazine.

The *cortège* reaches the plaza, and the noise of the repeated rhythms of the unharmonious bands assaults the ear-drums physically; the Chinelos are now a wild rabble, leaping and loping, their arms moving, half bent, in a rotary action, the knees bending beneath the skirts. Before he leaps each dancer makes a little run which seems like some primitive caricature of graceful, almost effeminate, movement. Round and round the plaza go the Chinelos, holding out a hand for a bottle of beer as they pass a cantina, but never ceasing to run and leap as they drink it—like bicyclists on the Tour de France.

Although the dance is traditionally an outburst of high spirits before the austerities of Lent, there is clearly some other significance to the form of the costumes and the actual movements of the dance. If you ask one of the women who have spent so many weeks preparing the dresses for their men they will tell you that they have no idea why they should have made the masks with such long, elegant mustachios and beards—that there is no reason other than custom. The custom is evidently post-Conquest since pure Indians have the good fortune not to be able to grow hair on their faces. The beards on the masks are of just the kind which Cortes and the conquistadores wore, and which so impressed the Indians when they landed on the Gulf Coast. My own theory is that the dancers represent the Spaniards and that some of the movements in the dance are intended to make fun of mannerisms in walking which had amused the Indians of the past. The name for the dancers supports this idea; “Chinelos” can mean either “Chinese” or “foreigners”.

In the old days before the invasion from civilization the fiesta was an act of private ecstasy, a genuine explosion of high spirits, and those who saw the dances then remember the fine frenzy with which they were performed. Today something has gone and there is little frenzy—perhaps the rows of white faces and the ranks of motorcars inhibit the Chinelos.

After three hours of leaping the Chinelos break off and sit in the cantinas, masks half raised, drinking beer or *pulque*, and eating the

special chicken *tacos* of the day; while from the cedar-covered terrace above the plaza comes the voice of a favourite singer in the village, a cracked, melancholy, hypnotic voice. ‘*Yo vidé un naturalito*’, he sings, sometimes using Nahuatl words,

Yo vidé un naturalito
Que a su Indita la paró
En un lugar tan solito,
Que de amores le trató.
Observé las palabritas
Que la decía, no sé que,
“*Xinechmaca* tu boquita
Para que yo besaré.”
Y le respondió la Indita:
“*Amo, amo, Juan José*”.

I saw a simple soul
Who in a lonely place
Just right for love,
Stopped his Indian sweetheart.
I heard the sweet words that he said—
And much else I cannot say—
“Give me your little mouth
And I will kiss you”,
But to this the Indian girl would say,
“No, no, Juan José.”

Vendors are selling drinks to the crowds, and heaped *tamales* sizzle in pans of fat at the roadside. But the people of the village remember that Tepoztecatl was the god of mild drunkenness and they do not overdo the drinking, or at least not until the second session of dancing is over and the evening’s fun has begun. Then, for certain, some will be fighting drunk and it will be unusual if the day ends without a knifing or a *machete* fight.

It is on the second and third days of the fiesta, when the tourists have nearly all gone, that the celebration seems most genuine and the village most itself. Everybody drinks, sings and dances in the spaces among the shrubberies in the smaller plaza, while a band plays modern dance music in the little green bandstand. And if you find yourself, the only outsider in the place, standing at the centre of it all, observing the couples walking hand in hand in the shrubbery, the old women chattering as they sit on the low wall, you may feel strangely lonely; for the village no longer cares who you are, has returned to its scarcely changing rhythm of life. You look through the evening sky towards the silhouette of the northern rock-face—still more fantastic by night than by day—and there is the hump of the mound of stones that was once the pyramid of Tepoztēcatl. Perhaps there is even someone, now, strewing the remains of his altar with copal incense.

The Chagga Elect a Supreme Chief

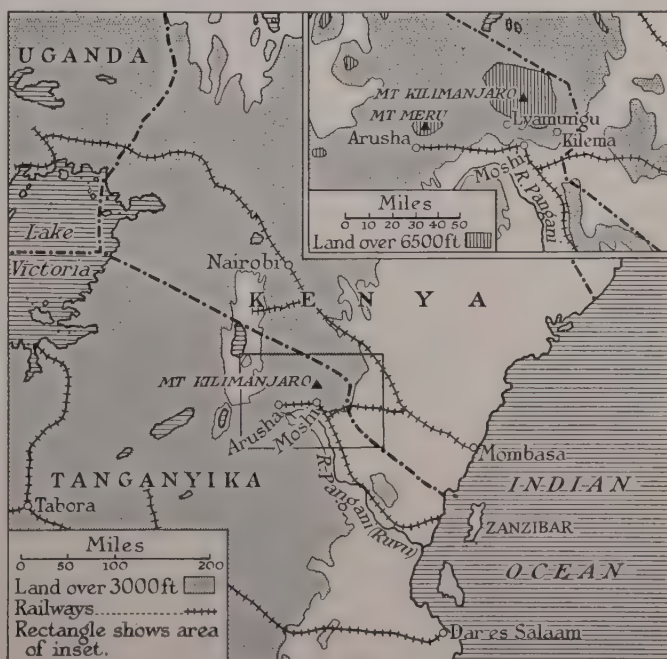
by J. P. MOFFETT

When an African tribe numbering about 265,000 can spend £200,000 on a community centre, their leaders' ability to address men of other races on equal terms is evidently much enhanced. This well-founded economic road to political and social progress, which the Kikuyu in neighbouring Kenya have not taken, is the one marked out for the Chagga of Tanganyika, by the wisdom of their ancestors and their own intelligence, to follow under the leadership of their new supreme chief

AN event has recently taken place of a kind so unusual in these days, when "democratization" and "broadening the basis of government" are the catchwords in colonial administration, that it calls for comment and explanation. The Chagga, one of the more advanced and progressive tribes in Tanganyika, have elected a single chief to rule over them; the first time in their chequered history that there has been one supreme chief in Chaggaland. While, elsewhere, the importance of chieftainship has been dwindling and the chief's powers have gradually been devolving upon others, on the slopes of Kilimanjaro the people have asked for, and duly elected by democratic methods, a *Mangi Mkuu*, a "high" or supreme chief.

The main reason for this somewhat unusual step is the persistence of a strong monarchical tendency, together with a surprising degree of conservatism, amongst a tribe famous in East Africa for its progress economically and educationally. The Chagga in outward appearance and way of life have altered considerably since the advent of the European, but they have, nevertheless, retained very firmly their tribal characteristics and outlook. When the first Europeans visited the mountain they found that the country was known as "Chagga" but that the people living on it called themselves "Wakibosho", "Wamachame", "Wakilema", etc.; after the names of the areas where they lived, and did not consider themselves as forming a single tribe. There was a sufficient geographical explanation for this: the mountainsides were riven by deep gorges down which the waters from the

melting glaciers tumbled to unite in the great Ruvu or Pangani river in the plains below. Such gorges formed natural barriers between kingdom and kingdom and were reinforced, where necessary, by artificial trenches, sometimes twenty or more feet deep. Thus while there was communication between the petty kingdoms, to the extent that there was, generally speaking, a common language, such intercourse was restricted by feud and suspicion, and tendencies towards genuine amalgamation did not exist. Had these mountain people been more exposed than they were to attacks from the Masai it is conceivable that necessity might have brought about some kind of unity; but they suffered from sporadic raids only and at such times retired behind stone-walled enclosures or into man-made caverns in the mountainside. Thus they were free to carry on the kind of ragged warfare which is



A. J. Thornton



Photographs reproduced by courtesy of the Public Relations Office, Tanganyika Territory

The Chagga occupy the fertile southern slopes of Kilimanjaro overlooking the town of Moshi in Tanganyika. Early European observers were greatly impressed by their agriculture, their receptive interest in the arts of European civilization, and their liking for strong hereditary rule

always waged on the "marches" between different kingdoms, and this was how the first explorers found them.

Kilimanjaro and its fabulous ice-cap had of course been a focus of attention ever since stories of a great mountain with a white top reached the ears of the early explorers. Johannes Rebmann, a German in the employ of the Church Missionary Society, set out in April 1848, from the mission station at Rabai Mpia, near Mombasa, with nine men and an umbrella, "commending himself to the guidance of Providence", to visit the country of "Jagga". His account of his first clear view of

the great mountain is simply told. He records in his diary that, on May 11 :

In the midst of a great wilderness, full of wild beasts, such as rhinoceroses, buffaloes, and elephants, we slept beneath thorn-bushes, quietly and securely under God's gracious protection. This morning we discerned the mountains of Jagga more distinctly than ever : and about ten o'clock I fancied I saw the summit of one of them covered with a dazzlingly white cloud. My guide called the white which I saw merely *Beredi*, cold ; it was perfectly clear to me, however, that it could be nothing else but snow.



The old men of the Chagga tribe have seen many changes in their countryside and people "whose outward appearance and way of life have altered considerably since the advent of the European", but these changes have not materially affected the outlook or characteristics of the tribe



"The present prosperity of the Chagga is due primarily to two things: their eagerness to learn . . . and their coffee."

The two are complementary, for the growing of coffee requires a high degree of agricultural skill and this is part of the Chagga heritage; but its application to coffee-growing is due as much to their own receptiveness as to the encouragement and backing of Europeans like Sir Charles Dundas. (Above) A coffee plantation. (Left) Girls picking coffee



Sorting out coffee beans on a Chagga coffee plantation. The processing of coffee also requires expert care, which the tribe's eagerness to learn from Europeans enables them to devote to it

Although he spent only a few days in the country Rebmann was impressed by both the people and their rulers and made this very pertinent comparison and comment :

Among the Wakamba in their plains (neighbours of the Chagga) there is a uniform level, so that scarcely any individual is clothed with any degree of authority and mastership. The Jaggas go to the other extreme; they exalt a single individual to such a political height above themselves that they are almost slaves, just as their snow-crowned Kilimanjaro lifts its head so high above the clouds that the other mountains around it are almost reduced to comparative insignificance.

Later came Charles New, another intrepid missionary, who visited the mountain in 1871 and, through sheer dogged persistence in the face of every obstacle (not least of which was the terror of his porters) reached the snow-line and satisfied himself that it really was

snow. New was also impressed with the Chagga, finding them "vastly superior to most of the agricultural races" with whom he had come in contact and, not unnaturally, being very taken with their magnificent system of water-furrows. He too noted that "the government in Chagga is a royalty, absolute power being vested in the hands of the chief, the succession being hereditary and following the male line".

It is interesting, in view of the avid desire for education which the tribe later manifested, to note the words of the great chief Mandara to New when the missionary was setting out on his return journey. New records that Mandara said : "I want you very much to return to Moshi, particularly if you bring some artisans with you. I shall be glad to have my young people taught to read and write, I will give you a plot of land upon which to build a house, and I will build one



Most of Tanganyika's coffee is produced by the Kilimanjaro Native Cooperative Union which was formed in 1925 as a result of increasing popularity of coffee-growing among African farmers on the mountainside. (Above) Coffee being taken to market. (Below) The local cooperative buying store





One of the undertakings of the Kilimanjaro Native Cooperative Union is the Coffee Research Station at Lyamungu, where (above) samples of coffee are carefully numbered, dated and filed in a "coffee library" at the curing works after (below) an expert has examined and tested them for flavour





The new community centre of the Kilimanjaro Native Cooperative Union begun in 1950. The Union's membership of 32,000 now owns 19,230 acres of coffee, producing a crop worth £1,000,000 a year

near you. Come back by all means." New believed that Mandara meant every word he said and later events proved him right. He was followed by the explorer, Baron Carl von der Decken, who paid three visits to the mountain, getting as high as 14,000 feet and making maps (which, incidentally, were subsequently found to be extraordinarily accurate). Later came the notorious Carl Peters and Dr Juhlke, who concluded "treaties" with Mandara and other chiefs placing Kilimanjaro and some neighbouring chiefdoms under the "sovereignty" of the German East Africa company—the first steps to the eventual annexation of the whole of this area. The Chagga resisted the Germans but did not resist instruction in the arts of civilization and the early missionaries found on the mountain a people receptive and willing to learn.

An equally famous contemporary of Mandara was Chief Marealle, who was largely responsible for the fact that the Germans did not meet more opposition than they actually encountered in "annexing" Kilimanjaro, and who for many years was completely trusted by them and regarded as the foremost chief

of the whole tribe. It is his grandson, Thomas Lenana Mlanga Marealle, who has now followed in his footsteps.

The Chagga, now numbering 265,000, occupy an area of about half-a-million acres on the exceedingly fertile slopes of the mountain. Here they live (still for the most part in round thatched huts, although numbers are now building stone houses) on their *vihamba*, plots of about an acre in size, on which they grow their staple crop, bananas, and on which they also grow the crop which has brought them comparative wealth, coffee, and the almost equally indispensable source of beer, eleusine. The last-mentioned must ripen in sunshine—must therefore be grown in the dry season—must accordingly be irrigated: hence the magnificent system of water-furrows (made long before the arrival of the European) with which the mountainside is covered. Cattle are also kept and, since it is dangerous to take them down to the plains to graze because of the tsetse fly, they are stall-fed in the huts. In the old days this did not present much difficulty, but now it usually involves a walk of several miles daily, from the *vihamba* to

the nearest available grass. This is women's work and one of the more surprising sights is to see a party of them trudging uphill, chattering gaily, with heavy loads of greenstuffs on their heads. But this, for some, is not such a burden as it used to be, since, with their increasing wealth, many Chaggas now hire lorries for the work. On the lower slopes of the mountain maize and onions are grown, but the real home of the Chagga is his *kihamba*; so much so that it is the ambition of every Chagga, however far away from home he may wander, to return eventually and spend his old age peacefully amongst his bananas. But since their numbers have increased and are increasing, at a startling rate, whereas the amount of suitable land available is strictly limited, disputes and litigation are unending. The position was not made any easier by land alienation in German times. This in places had the effect of compressing an expanding population between the rigid barriers formed by the forest reserve on the higher slopes and the European coffee farms lower down. The opportunity was taken after

World War II, when a number of the farms previously in German ownership became available, to arrange a better distribution of land and to make plans for the future, and the Wilson Commission did what it could to ease the strain. But there is no doubt that the existence of this problem is in part responsible for what must regretfully be considered an outstanding characteristic of the Chagga—their suspicion of anything alien, often including the works of the Government.

The present prosperity of the Chagga is due primarily to two things: their eagerness to learn and to absorb the more obvious benefits of European civilization, and their coffee. Coffee was first grown on the mountain at the Roman Catholic Mission at Kilema over fifty years ago, and very early in the century a few Chaggas began to plant out trees. Others soon saw that coffee brought money, and by 1916 some 14,000 trees were owned by Chagga growers. Little further advance was made during World War I, but after it was over Major (now Sir Charles) Dundas, who was in charge of the district for several years, gave

The school for Agricultural Instructors is another of the Kilimanjaro Native Cooperative Union's undertakings, which turns out Africans trained to teach its members the latest farming methods





(Above) *In the presence of the Governor of Tanganyika and assembled notables, the newly elected supreme chief of the Chagga tribe is consecrated with due ceremony in the manner prescribed by ancient custom.*
 (Below) *For this occasion tribesmen among the audience have donned the war-dress of their forefathers*





Thomas Marealle, under whose leadership the Chagga tribe may be expected to continue their steady advance towards a successful adjustment of their traditional life to the conditions of the modern world

every encouragement to the Chagga to plant and the number of trees increased enormously. So popular had coffee-growing become that in 1925 the growers formed the Kilimanjaro Native Coffee Planters' Association "to protect and promote the interests of the native coffee growers on the mountain-side". In that year the crop totalled 100 tons of parchment and was sold in Moshi for 60 cents a pound (i.e. about $7\frac{1}{2}d.$). This association gave place in 1933 to the Kilimanjaro Native Cooperative Union (now widely known simply as the "K.N.C.U."), with some sixteen primary cooperative societies organized on a local basis. The K.N.C.U. has been of the very greatest importance in the development of the Chagga as a tribe and it plays a crucial part in their economic life. Much of its success is due to the patient and untiring efforts of its Executive Officer—Mr A. L. B. Bennett—who has served the Union for twenty years. It now has twenty-nine societies affiliated to it and a membership of over 32,000, owning 19,230 acres of coffee. In the year ending June 30, 1951, it sold coffee to the value of £1,228,150 on behalf of its members, and other commodities (hides and skins, maize, sunflower seed) to the value of £40,000. During World War II and in the following years all coffee produced was sold to the Ministry of Food, but it is now sold on the open market again. The Union is undertaking the distribution to all growers of specially selected trees, giving a greatly increased yield, which have been grown at the Coffee Research Station at Lyamungu—a task which it will take about twenty years to complete. It is putting up, at Moshi, a community centre costing about £200,000. This is being built in three sections: the first section contains a library, board room, offices, shops, nine double bed-sitting rooms, a roof garden, a canteen and a laundry; the second section will contain an assembly hall to seat 750 and an exhibition hall; and the third a restaurant to seat 250. The first section was opened by the Governor, Sir Edward Twin- ing, on March 17 last.

Such then are the Chagga, a highly intelligent, prosperous, and attractive people, living in beautiful surroundings on extremely fertile land, well educated, well dressed and well fed, the majority Christians, excitable, stubborn, litigious, yet highly conservative and distrustful of any foreign alien.

The present degree of distrust and suspicion is difficult to account for fully, but no doubt the traditional attitude towards the intruder was the genesis of it and the pressure of a rapidly expanding population on the

strictly limited available land—some of the best parts of which were held by aliens—helped to perpetuate and exaggerate it. At any rate it is partly to this characteristic attitude, in a community with such strongly marked monarchical tendencies, that we must look for an explanation of recent political events. The Chagga look to their new *Mangi Mkuu* for leadership, and to represent their tribal interests to the authorities, but they also want to interpose him, the acknowledged head of the tribe, between themselves and the Government. It seems that they feel that the increased prestige which will attach to a supreme chief will enable him to negotiate more effectively on behalf of his people with the *Serkali*. But the main reason—as should now be apparent—why they have chosen the present chief is because the tribe's monarchical tendencies are still very strongly marked and have expressed themselves in this adaptation of the old petty authoritarian system to modern needs.

Thomas Marealle, besides belonging to one of the most illustrious chiefly families on the mountain, is well aware of the habits and outlook of the European. He was educated at Moshi and Tabora government schools and on leaving school served as a clerk in the Provincial Administration and the Labour Department, mostly at Moshi and Arusha (he was in the District Office there with me for two years). Then he was sent to England to do a two-year course in Social Welfare work. He acquitted himself well on the course and returned to Tanganyika in 1946 as an Assistant Welfare Officer, serving in various parts of the Territory, and in 1951, when a broadcasting station was set up in Dar es Salaam, he assisted with the programme side of it. It was while he was thus engaged that he was elected to his present high office. He has a most difficult task and I doubt if more than a handful of his subjects realize just how difficult his position is. But he is intelligent and level-headed and keen to help his people, while appreciating the difficulties involved in the adjustment of a conservative and distrustful tribe to modern economic conditions. Whether he can succeed in this, even in part, and at the same time retain his people's confidence and support, remains to be seen; but if he does succeed, and becomes a supreme chief in fact as well as in name, he will be remembered long after his illustrious grandfather has been forgotten and he will have done as much for the tribe politically as Sir Charles Dundas (whose name is still revered amongst them) did for them economically when he taught them to grow coffee.

Hansestadt Hamburg

by S. GORDON JOSEPH

THE train crosses the southern arm of the Elbe and suddenly there is the paradox of Hamburg. It is the big city in a region of smallish market towns and fishing ports, the sprawling industrial conglomeration in a predominantly agricultural territory of compact farmstead villages. Yet not only is it a big city but, after Berlin, the largest in Germany and home of 1,500,000 citizens.

The paradox strikes all the more forcefully after the train journey from the Dutch border, mile after mile after mile through endless undulating countryside, trim but soporific. Then Hamburg looms up, a compelling punctuation mark on the northward route towards the pastoral peninsula of Schleswig-Holstein and even flatter Denmark.

But this state of things is not so very strange. Indeed it is even logical that, in an age of international commerce, there should be a great city on a river estuary opening eventually into the North Sea and leading thence to the wide ocean of the Atlantic. Other big towns of the North German Plain—Bremen and Wilhelmshaven, Cuxhaven and Emden—possess comparable advantages. But with less extensive economic hinterlands

or rivers of inferior navigability for the larger ships of modern times, these towns have not been able to equal the development of Hamburg in the 20th century.

Protected by dikes, the flat alluvial marshland of the North Sea coast continues along the Elbe estuary. Further inland stretches the dry, sandy zone of higher heathland and forest known as *Geest*. Along the borderline of these two soil types, settlements often came into being occupying the slightly higher geest. Such a site between the Elbe and Alster was first settled as a refugee camp by the North Elbe Saxons, but fell to Charlemagne at the beginning of the 9th century. The little township of Hammaburg, from the Saxon *Hamme* (forest), then became a Christian missionary centre.

Whatever forest may once have existed there certainly vanished centuries ago. No doubt much of it was used later to provide timber for the thousands of piles driven into the marshland at the banks of the Elbe, supporting the weight of the new brick buildings in the expanding city. It is on this marshland that the city-centre of today exists. Ages ago the Alster stream was dammed to supply



water-power and, near its point of entry into the Elbe, has formed a vast sheet of water like a lake across the town.

I decided to make my way to the Alster soon after arriving at the station. It was still early afternoon and the day was too fine for an earnest, critical examination or sightseeing tour. Here was an opportunity to indulge in an old German custom—the casual, carefree stroll they call a *Bummel*. But I felt certain misgivings. For Hamburg is not only a large industrial town; it had received a terrible hammering during the war. The prospect did not appear very attractive.

By 1945, ten per cent of the whole urban region had been utterly devastated and one-sixth of Hamburg proper destroyed. The dock area suffered even more intensive ruin and the wrecks of some three thousand vessels littered the Elbe. More than half of Hamburg's houses were destroyed beyond repair and the debris formed scores of small hills throughout the city which, with Berlin, shared the dismal title of the most heavily damaged city in the Reich, if not in the world. Yet during the last three or four years the rubble has been considerably cleared from the bombed sites and the rebuilding of the city has advanced at a rate far surpassing the expectations of the early days. Top on the reconstruction priority list was the harbour area, for the prosperity of the port is the key to the city's history.

Hamburg performed rather indifferently the role of episcopal city originally thrust upon it, much preferring the mercantile life for which it was naturally suited. To that end it joined the league of North German port-towns with which it has been associated in name ever since. The Hanseatic League was already in the 13th century one of the most powerful forces in northern commerce, with considerable privileges and advantages in foreign trading. By the middle of the 13th century the built-up area of Hamburg was enclosed by a protecting wall and in 1292 it won its complete independence from feudal overlordship.

When the centre of international commerce moved from the Baltic towards the Atlantic at the end of the Middle Ages the fortunes of the Hanseatic League declined. But Hamburg had fostered additional contacts outside the Baltic and the framework of the Hanse and did not share in the adversity of Lübeck and her sister ports of the League. In fact the city government wrote to Queen Elizabeth I, in 1564, recommending the wealthy English Merchant Adventurers to trade in their city of Hamburg under conditions of security and

freedom. The subsequent treaty was regarded as a betrayal by the other members of the Hanse, but they were unable to prevent its signing.

The 16th century also saw three events which were to affect profoundly the political and religious character of the city and its economic development, right up to the present century. These were the recognition of Hamburg by the Emperor Maximilian I as a Free Imperial City, the town's adoption of the Reformation, and the founding of the first German Bourse. The succeeding years were marked by the attempts of foreign powers to conquer the city, nobody achieving that object until Napoleon, whose four-year occupation came to an end in 1814.

It was from about then that the period of real expansion began, both in the city's area and in its volume of world trade. The restricting town walls were pulled down in the 1820s, commercial routes were extended to India, Africa and the new South American republics, the docks spread southwards across the Elbe and the famous shipping company HAPAG (Hamburg Amerika Paketfahrt Aktien-Gesellschaft) was founded in 1847. After the unification of Germany under Bismarck, Hamburg experienced a more spectacular rate of general expansion, yet even during this phase of confident German nationalism the city continued to show its spirit of independence. It accepted membership of the Reich in 1870 only on terms of equality with Prussia and not until 1888 did it join the German Customs Union. Soon afterwards Hamburg had risen to become the greatest port on the continent and one of the largest in the world.

A significant amount of port traffic during the Bismarck regime was concerned with the movement overseas of men and women, luckless peasants and proletarians who had suffered in the era of Germany's industrialization. Those emigrant days were recalled for me by an innocent request for a hamburger. A *bummel* demands a bite and I relished the prospect of the real thing in the city of its birth; but as the waiter pointed out, to my surprise: "It isn't exactly a native dish. They say it was invented by peasants from the south, waiting in the port for ships to America. They used to collect odd scraps of meat, mince and mix them together with vegetables and the dish was born. It was called a hamburger in honour of the city, but on the whole it emigrated with them across the Atlantic!"

This rapid industrialization brought with it other problems which came to a head between the two World Wars. The big city at-



Fremdenverkehrsverein, 1

Hamburg was one of the most heavily raided cities in World War II though the marshy nature of the soil on which it is sited saved many important buildings. But the people of Hamburg have set about repairing their city with determination—concentrating initially on the harbour and on public and commercial buildings

Fremdenverkehrsverein, 1





(Left) The ornate 19th-century Renaissance Rathaus or Town Hall of Hamburg is symbolic of the city's proud past as a leading member of the Hanseatic League and a centre of trade. It has been a Free City since the Middle Ages and is capital of the Land of Hamburg which now covers an area of 288 square miles

All photographs, except three, by the author

Hamburg grew at the junction of the rivers Elbe and Alster. The latter, early dammed to provide water-power, forms a lake in the city's centre, divided by the Lombardsbrücke. (Right) The Small Alster is lined with promenades, cafés and hotels which give it a Venetian air that belies the Nordic stolidity of many of the other parts of the town



Between the Inner Alster and the Elbe lies the Old Town. (Right) From a bridge over one of the canals leading through this part of Hamburg are seen the city's oldest tower, that of St Catherine's Church (it lost its top in the war), and the spire of St Nicholas, by Sir George Gilbert Scott, designer of the Albert Memorial



(Left) The barge-laden canals of the Old Town, lined with tall buildings, characterize the historic centre of Hamburg. Increasing industrialization caused an influx which multiplied the population fivefold in the sixty years to 1930: prevented from expanding outwards by ancient territorial limits, it became even denser than the population of Berlin



Fremdenverkehrsverein, Hamburg

The ramparts and moat which surrounded old Hamburg have been laid out as a parkway with boulevards along which are found many of the public buildings: this section shows the Untergrundbahn (which travels for part of the way above ground) and in the distance a statue of Bismarck

tracted a vast influx of labour from the surrounding regions and the population increased from over 250,000 in 1870 to 1,250,000 by 1930. But Hamburg was unable to expand physically in anything like the same proportion, owing to the complicated territorial arrangements inherited from bygone days; and this factor was largely responsible for the multiplication of gloomy many-storeyed tenements throughout the city. The city became, in fact, more densely populated than Berlin itself.

The main centres of industry and the new port extensions sprang up in the only directions left to them—across the river from the residential section; and this led to enormous transport congestion during the daily movement of workers and business traffic in spite of road and rail bridges over the Elbe, numerous ferry services, and a tunnel opened beneath the river at St Pauli about a mile downstream from the town centre.

To all this were added acute administra-

tive problems. The natural city area consisted of the Hamburg nucleus and three sizeable urban districts: Altona, Wandsbek and the Harburg-Wilhelmsburg complex. Yet not only were the four towns separate and independent, but they were enclosed by other areas belonging to neighbouring States such as Prussia and Hanover. This chaos handed down from feudal times also gravely hampered the development of an efficient port administration, for existing State boundary lines often cut blindly across the natural organism of dockland.

Much to Hamburg's distress, the solution had to await the sweeping powers of a totalitarian regime and the National Socialist government issued in 1937 the decree which brought into being the single, united Hansestadt of Hamburg with its four suburbs, giving the city at the same time a unified port control. But the Reich did not find it had created the willing and grateful lackey intended. For Hamburg, commercially ex-

trovert, was by tradition opposed to any form of national self-sufficiency such as Hitler's economic policy of *Autarkie*. This and the world depression of the 1930s hit the city hard and the Nazis found Hamburg recalcitrant to the end.

Anybody who imagines Hamburg to be an unprepossessing town from the effects of industrialization and war-damage is very wide of the mark. I had reached the Alster which is its particular pride and was well known before the war to tourists from all over the world. Divided into two by the "Lombards' Bridge", a large expanse of water stretches to the north and is used for boating and bathing. Below Lombardsbrücke, the Inner Alster is a smaller square surrounded on its other sides by wide promenades lined with modern office-buildings, fashionable hotels and shops, the whole strangely reminiscent of many a Swiss lake-town. The view from the tree-lined bridge road is one of the most attractive which Hamburg offers, especially towards evening when the silhouette of the city with the spires of its Town Hall and churches can be seen across the lake, and the coloured lights of restaurants and shops are reflected in the water.

The Lombardsbrücke is part of a two-mile thoroughfare which girdles the city and results from the demolition of the city walls, accompanied by aesthetic and far-sighted planning. A stroll along its spacious pavements and boulevards took me past the public buildings and squares which unself-consciously commemorate the commercial and artistic achievements of the past hundred years—museums, art-galleries, gardens and market-places. Each end of the arc leads down to the Elbe which means, of course, the harbour.

The dockland area is packed with interest and indeed realizes moments of exquisite beauty for which I was quite unprepared in a hard-working port. Here for a start are some of the only pre-19th-century buildings left to the city after the ruinous fire of 1842 which destroyed about a third of the historic town. Here, too, is evinced in the hostels for foreign seamen and the ships in the harbour the cosmopolitan nature of Hamburg, not the sophisticated international atmosphere of the Inner Alster, but the melting-pot of the mercantile world. The dock section is interlaced with canals, or *Fleten* as they are called, which carry the barges right into the city, subject to the tidal Elbe, where they deposit the smaller cargoes in numerous warehouses built directly at the water's edge.

At the east end of the old port and the girdle-road are the striking offices of the business quarter. A stolid burgher city might just be expected to erect buildings of well-tryed conservative design, and certainly sufficient examples of these exist. But among them are many surprises, constructions of quite unusual and daring form. Anything but conventional is Fritz Höger's ocean-liner-shaped building of ten storeys (or should one say "decks"?), the Chile Haus erected in 1920-3, while across the street is the decorated Sprinkenhof block in which the same architect had a hand.

These and other elaborate giants of the uncertain 1920s contrast significantly with the simple lines of current constructions. On the north road out of the city lies the Grindelberg suburb which has excited plenty of attention since 1950. For on Grindel hill were built the first skyscraper flats of the German reconstruction. These houses are certainly on a large scale but their design and placing retain the human proportions essential to the project. A similar modesty in size and style has also been achieved in a number of the new business buildings erected since the war and many of these contain dwelling apartments and flats in their upper storeys. It is true that a greater part of initial reconstruction was devoted to public and commercial building than to housing, an inevitable consequence of material and capital shortages in a free economy. But houses are now going up in Hamburg at an average rate of 20,000 a year, compared with the pre-war figure of 15,000.

In the port, too, most of the quay-sheds, warehouses, bridges and cranes are restored, while the river and harbour-basins have been almost entirely cleared of wreckage. Ship-building enterprises are beginning to function again for the first time since the war, with the construction of merchant vessels. The total net tonnage of ships arriving at the port stands at nearly three-quarters of the pre-war 20,000,000 tons and the volume of incoming and outgoing merchandise has reached a similar proportion. Not only is the city a port and traffic centre but a versatile industrial town with a wide variety of products. It has healthy machine, chemical, optical and precision instrument manufactures all engaged in the vital export trade and the index figure of total industrial production stands at 6 per cent above that of 1936.

But the people of Hamburg do not delude themselves that everything is rosy. They know that the port capacity is still only at a fraction of its 1938 level. They have experienced



Hamburg is a 'world-city' in a sense which does not apply to any other German town. In the 1920s huge office blocks were erected, of which the most famous is the Chile House (left), constructed for Henry Sloman whose vast fortune was made from Chilean saltpetre



(Right) "The prosperity of the port is the key to the city's history." Before World War II shipping to a total of 20,000,000 tons was handled annually; the present figure has already reached almost three-quarters of that amount



Spreading across the Elbe, a maze of docks, warehouses and canals—most of them 19th-century developments—provide Hamburg's window to the sea and make it the greatest port on the Continent

periodic crises of unemployment. They know that the population is outpacing the means to supply its needs, and that this situation is aggravated by a most serious social problem prevalent in contemporary Europe. As an acquaintance in the city told me: "One in every eight inhabitants is a *Flüchtling*, a refugee, you know, and the city must try to house them in addition to our own citizens, besides finding them jobs while employment is scarce".

Most worrying of all, the division of Germany into Allied and Soviet zones has placed Hamburg and its port right on the edge of Western commerce instead of in the central position it has continuously enjoyed over the past centuries. Hamburg's citizens remember what happened to mighty Lübeck and her sister cities of the Hanse in the Baltic when a

similar shift of the economic centre of gravity took place at the end of the Middle Ages. With much of her former hinterland cut away, Hamburg is beginning to experience a chilly current of that back-door draught.

When I returned to the hotel for dinner, I noticed an intriguing announcement in the press. In celebration of something or other, there was to be the following evening a bummel along the Reeperbahn, axis of Hamburg night-life, everyone invited. A communal stroll! Curiosity took me there, walking with the crowds along the flare-lit streets and avenues. And they bummelled. No shepherding, no marching, a genuine, casual, carefree stroll, a whole city taking a night out. That could only be done by a city which has cleared away its pessimism with its 6000 acres of rubble.

Outdoors in Australia

by HUME DOW

A BRONZED, loose-limbed six-footer, riding the boundary of his cattle-station somewhere back of beyond—the “typical Australian”? Of course not. We all know now that the Australian is a city-dweller, tied to his factory or office, with a small home in suburbia. The legendary boundary-rider is only a symbol, and as much a curiosity to the Sydneysider or the Melburnian as to any Englishman.

Yet, while our citified Australian may seldom see an example of this traditional figure, just as he rarely sees an aboriginal, he nevertheless reflects the myth in countless ways. “My people came from the bush, you know, ran sheep on the Darling back of Bourke” is the sort of remark that is said with pride and received with envy. And often it is true. Any elderly Australian can remember the days when pioneering the vast plains and the broad river flats of the interior was the very life of the country.

The point, of course, is that most of the city people, or their fathers and mothers, have grown up or worked on the land. “The bush” has provided the human material for the dramatic mushroom-growth of the State capitals, and a nostalgic hankering for the countryside remains. I remember a suburban housewife in Melbourne musing over the contradiction.

“When we were growing wheat up in the Mallee,” she said, “George had only one idea—to get enough money to buy himself a shop and move into town. Now we have the shop, and his whole aim in life is to get enough time off at weekends so we can go to the bush. I know it sounds silly, but I felt the same as he did back in the Mallee and I feel the same as he does now . . .”

George’s wife may be more articulate than most, but you could find the same story in any suburban street in Sydney or Adelaide or Brisbane. Her idea of “going to the bush” is modest enough. She merely wants to get sufficiently far from the city bustle to have a family picnic “under some real gums”—not the odd tree or two in the backyard, but some spot where the only building in sight is an old shed seen through the scraggy trunks of endless eucalypts. And, although in widely differing forms, her love of the bush reappears in almost any Australian you can find. The ultimate ambition of thousands of subur-

banites, for example, is to have a shack in the hills or at the seaside, first of all as a week-end refuge and eventually as a quiet place for the years of retirement. It is remarkable how many manage to build or buy that bush shack on a shoestring, let alone the wealthy business men (“Collins Street Cockies” we call them) who retire to hillside farms.

“The bush” is a loose term in Australia: it means much more than “woodlands”. Although most would be hard put to define it, the word is usually broad enough in the city mind to include the mountains and the distant beaches, wheatfield and sheep-station, even the country town—anywhere, in fact, that is recognizably outside the city. Thus, Australians will talk of bush traditions, bush attitudes, even “bush culture”, and it is worth mentioning that these traditions are so much a part of the nation that only in the last dozen years or so has Australian literature given its main attention to the cities where most Australians live.

Yet, close as the Australian feels emotionally to the bush, it is not always easy for him to get there. The big cities have, like Topsy, “grow’d” without rhyme or reason. Perhaps “sprawled out” would be more apt; for the incursions that the suburbs have made into neighbouring countryside are almost as depressing as in London, and with less excuse. Of all the capitals, Adelaide is the only one that can boast of a green belt, and that, a narrow one, was the result of a governor’s forethought a century ago. In most cases you must travel five, ten, or sometimes even twenty miles before you can safely say that you have left the suburbs behind. This is the price the Australian pays for his firm prejudice against blocks of flats, for his insistence that happiness is impossible without his own home and its two or three thousand square feet of garden—a prejudice, ironically enough, that derives from his “bush” outlook.

Even so, although miles of suburbs may separate most families from the pleasures of picnicking, camping and bushwalking, it is surprising how many do get to the country. George and his wife can take the children out among “the real gums” now: by careful saving, they have managed to buy a second-hand car. And they are not exceptional; every third or fourth family has some sort of



All photographs, except one, by David Moore

Ocean-fishing on Australia's Pacific coast is an active sport whether it be fighting the surf from a rocky promontory, as above, or the deep-sea pursuit of marlin, tuna and shark. Less ambitious fishermen find more time for contemplation in the quiet mountain streams of the Great Dividing Range, where trout and blackfish offer moderate exercise and good dinners

In Sydney Harbour, on the Derwent at Hobart or on the Swan at Perth, the small 18- and 16-footers have made yachting a sport for all. Cheaply built and easy to maintain, they are often owned and shared by several families of small means who take turns at racing them and having them out for a weekend sail





Harbours and estuaries are shared both by large ocean-going yachts and smaller fry. The well-to-do owners spend months preparing for the big blue-water races, from Sydney to Hobart or the Trans-Tasman to New Zealand. Thousands watch the start of the Hobart race from boats or from their homes on the shore



Dupain

The Pacific surf beaches of Sydney's eastern suburbs have become so crowded that many now seek more distant coastlines. Here, the highly trained surf life-saving patrol has warned the swimmers that a shark is near. In a few minutes, the "all clear" will sound, sending thousands back into the water



The island continent has few high mountains ; but on some a hundred miles or so from Sydney and Melbourne there are excellent ski-runs offering a contrast to swimming and surfing. Ski-clubs now organize frequent winter trips to Mt Kosciusko (7328 feet) and weekend visits to runs nearer the capitals



Australia was pioneered on horseback, and the horse is still the companion, come work, come leisure, of every man in the outback or along the endless coastline. City-dwellers, while "having a few bob on the nags" at the races, envy the boundary-rider his opportunities and often jump into the saddle when they can get away to the hills or venture farther inland

automobile these days, an investment which is frequently made with an eye to aimless drives in the bush rather than to purposeful city transport.

The traditional Christmas holiday period—early summer in the Southern Hemisphere—will see thousands driving off, with tents and sleeping bags bursting from the boots or with caravans trailing behind. Whole families make for such mountain gullies or distant seaboards as would seem remote indeed to English eyes. However, no Australian waits for the annual holiday; on almost any free day in any season, casual jaunts to the bush are occasions for the ritual of "billy tea" and lamb chops grilled with gum leaves over an open fire of twigs and sticks. No matter where he is, the Australian will always feel homesick when he smells the scent of burning gum leaves, the greyish-green foliage of the ever-present eucalypt—and the memory of a bush picnic is usually the reason.

Once clear of the cities, billy tea is as much the national drink as wine to a Frenchman; it is as necessary to workmen having their lunch or "smoko" by the roadside as to any family picnic. The recipe? Take a thin tin can with a wire handle, fill it with water from a nearby creek and hang it from a stick or crossbar over an open fire; when the water boils, throw in a handful of tea-leaves; let it boil again briefly and, when it is off the fire, bang it on the side with a stick to make the leaves settle. The result is very good tea indeed, and it is not surprising that the jolly swagman of our national song, "Waltzing Matilda", should have been singing "as he sat and waited while his billy boiled".

The pleasures of this beverage and its accompaniment of gum-grilled chops are not the strict preserve of families with cars. Any weekend, there are thousands of young bush-lovers to be seen, streaming out of the cities on bicycles, motor-bikes or by rule of thumb; motorists on tour in Europe may have noticed how often hitch-hikers turn out to be Australians experienced in the art. A clear sky and a hot sun produce a casual, easy-going attitude to open-air trips. An outing is not an event to be planned in advance, like the Londoner's day at Margate or Brighton: it is taken for granted by thousands as the natural way to use any leisure time at all.

Not all the fresh-air enthusiasts, of course, get to the country every weekend. Distance forces many to seek their "outdoors" within the city limits. And it is not surprising to learn that Australia's overcrowded cities offer tennis-clubs, golf-courses and countless cricket-pitches: they have produced men who play these sports well enough. The really remarkable thing is that office clerks and factory workers are used to going to the races in an inner suburb or to having a surf beach at the end of a short tram ride. Even the distance to Epsom is not a point in London's favour to the visiting Australian—let alone the distance to Newquay.

One expects to find a drover in western Queensland bronzed and healthy from his life in the open; the real evidence of our devotion to the sun is in the array of tanned arms, legs and faces to be seen in any city street. Take the office girls who have the misfortune to work on Saturday mornings. At midday, they join the thronging mobs at overcrowded tram-stops and city railway platforms, their jackets removed, brown shoulders exhibited above their brief sundresses. They talk excitedly in staccato tones about being in time for the first race or the most promising football match—but they would not dream of going if it were not in the open air. Many can be seen nearby, carrying beach bags full of bathing togs and picnic lunches, sun-hats hanging from their arms: some will be out on bright, white sand within half an hour, others will choose to go farther down the shore to escape the crowds.

Yet those who have to return home to "inland suburbs" consider themselves cut off from the beach; they envy the thousands who live so close to the sea that they can go in for a dip every evening. In these fortunate homes, it becomes routine for the children to go straight from school to seashore, and for father or sister to join them on the beach later when work is finished for the day.

Thousands may dream of the story-book Australia, of mile upon mile of tall eucalypts with their ungainly irregular shapes and cranky angles, of the "great outback" so familiar in legend. But to the millions, "outdoors in Australia" means not travel to the isolated inland, but sunshine close to the metropolis, or in it.

Leonardo da Vinci—Geographer

by HARRY ROBINSON

THE quincentenary of Leonardo da Vinci's birth was celebrated last year and a number of appreciations of this truly remarkable man have appeared. While eloquent tribute has been paid to his scientific work as well as to his uncontested genius as an artist, little, if anything, has been said of him as a geographer and it seems appropriate that some attention should be directed to his geographical ideas and contributions to geographical science.

Leonardo, by any standards, was a man of extraordinary genius. Few men have rivalled the multifiform attainments of this son of Florence; few, indeed, have come so near to being "the complete man". Admittedly supreme as an artist, sculptor and architect, he was also an inventor and scientist of no mean achievement. There are some who would call him the greatest inventor of all time, while the least that can be said of him as a scientist is that he made original and penetrating observations in virtually the entire field of natural science—in astronomy, physics and geology, physical geography, meteorology and hydro-dynamics, biology, anatomy and physiology. If only Leonardo had had the capacity to frame laws based upon his observations he would have been a scientist without peer, for he was an anticipator of Galileo, Bacon, Newton, Harvey, Pascal and Watt.

Leonardo is the Renaissance figure *par excellence*: his extreme versatility in a dozen different directions of intellectual activity and artistry place him head and shoulders above the many giants of that wonderful age. This is not to deny that Leonardo had his limitations and since Richter's study (1883) of him it has been proved that many of the ideas and inventions and works of art, previously attributed to him, are only borrowings or elaborations of works of his contemporaries. Leonardo, like many heroes of the past, has been subjected to a thorough 'debunking' process; but when all the 'bunk' has been stripped away he still stands as a great figure whose versatility and attainments astound us even in this present age of astonishing achievement.

Leonardo was born five hundred years ago in the hill-top village of Vinci, whence the family took its name, situated near Florence,

a city which had already, at that time, felt the impact of the Renaissance and was enjoying the magnificence of Lorenzo de Medici. The illegitimate son of a nobleman, Leonardo had a private education, of a kind which may well have anticipated that later propounded by Castiglione in his *Il Cortegiano*. As a youth he showed an aptitude for art and was apprenticed—according to Vasari—to the painter and sculptor Verrocchio. For seven years he attended Verrocchio's *bottega* and then, in 1477, he commenced work as an independent artist under the patronage of Lorenzo the Magnificent. In 1480, when he was twenty-eight, Florentine life began to pall and he had an urge to greater activity. He wrote to Ludovico Sforza, Duke of Milan (commonly known as "the Moor"), requesting employment in his service and was rewarded with a post as military engineer. Until his death in 1519, Leonardo served the greatest princes of the age—il Moro, the notorious Cesare Borgia, and Francis I of France—as military engineer, fortress-constructor, canal-builder, surveyor, architect, artist and organizer of court pageants.

Throughout his forty years of active foreign employment his agile, incisive, inquiring mind wrestled with the problems of natural science and he wrote voluminously about them. Leonardo's writings—some five thousand sheets of manuscript notes—contain evidence of a rare scientific insight and technical virtuosity matched by almost incredible industry. The breadth of his learning and knowledge spanned the whole domain of science and he illuminated everything he touched upon yet, surprisingly enough, he exerted comparatively small influence upon his age. This is partly explained, according to Professor E. Oberhummer ("Leonardo da Vinci and the Art of the Renaissance", *Geographical Journal*, 1909), by Leonardo's linguistic and literary limitations: his notes are cryptic, incoherent and unsystematized and, frequently, downright ungrammatical. It is as though the very wealth of ideas which tumbled in a never-ending cascade from his versatile mind obstructed and defied their literary expression. Leonardo intended to rewrite the discursive jottings of his effervescing mind for he wrote that he hoped "afterwards to arrange them in order in their proper places

This noble head by Leonardo da Vinci is generally believed to be a self-portrait. His renown as an artist, inventor and scientist has overshadowed his contributions to geography

according to subjects of which they treat". Moreover, Leonardo transcribed his notes in his own peculiar hand which was written from right to left, i.e. mirror-writing. Leonardo's writings, with one or two exceptions, were never published and the bulk of them, after his death, were dispersed to lie hidden and inaccessible until the 19th century. Thus his prolific ideas were unproductive and provided no stimulus even though the tradition of his genius, recognized by his patrons and acclaimed by his contemporaries, remained intact.

Leonardo the geographer is little known and the influence of his ideas and work little appreciated. Leonardo the artist and inventor has long overshadowed Leonardo the thinker and scientist, though this is natural and excusable in view of his greatness in the field of art. Just as his artistic works—perhaps only a fraction of his output, although modern opinion inclines to the belief that as an artist he was a slow worker—reveal merely a part of his genius in art, so his literary works—exasperatingly incomplete, aphoristic in character and widely scattered—give us only a glimpse of his amazingly fertile mind and of his contribution to geography. Many of Leonardo's memoranda have, of course, long been known and early attracted attention by their originality. Alexander von Humboldt, who named him the greatest physicist of the 15th century, recognized him as a geographer. Tribute was also paid by the German geographer Oscar Peschel who awarded Leonardo a prominent place amongst the Renaissance geographers. Leonardo's contributions to geography fall into two main categories: his observations of Nature clearly single him out as a pioneer of physical geography while his work as a cartographer, though less well known, demonstrates his proficiency in mapping and his contribution to cartographic method. Leonardo's writings provide us with the outlines of his conception of the nature



Royal Library, Turin

of the earth and his observations and ideas are sufficiently original and precise to warrant him a place amongst the makers of geography. It was unfortunate that his ideas were never printed and circulated for they would have revolutionized the old cosmography.

Leonardo possessed the true scientist's outlook and attitude to scientific inquiry. Throughout his life he placed immense faith in the value of experience and experience became his intellectual guide: on more than one occasion, indeed, he signed himself "Leonardo: disciple of experience". His knowledge was based upon observation, experience and experiment for he considered the inductive method to be the only sound, reliable and true method in science. Throughout all his notes is the recurrent theme that



*Reproduced by
Gracious permission
of Her Majesty the Queen*

Leonardo strongly supported the view, then contested, that the earth is round. This sketch of a world map (only one hemisphere is shown), drawn as the basis for a globe, is attributed to him

all scientific work should begin with experiments and end with conclusions. To him there was only one science—that based on accurate observation and the experience of the senses. This approach is in tune with his principles of artistic practice which emphasized the need for an exact study of natural forms as an essential basis for artistic expression. A careful study of anatomy, for instance, was a necessary prerequisite for the successful portrayal of the human body. Leonardo was convinced that only through

observation, experiment, measurement and calculation could the pattern and laws of Nature be discovered. Such a scientific approach, which is essentially modern in its outlook, was unusual in his time. Leonardo was one of a group of pioneers, beginning with Roger Bacon, who emphasized the importance of experimental method, a scientific technique which later found more pungent expression in the teachings of Peter Ramus and the Realist School.

Leonardo was infused with an insatiable

curiosity which continually surged through him and drove him incessantly to find out how everything lived, moved and had its being. As an artist he sought for design, colour and beauty but as a scientist he sought for the very secrets of life itself. This spirit of inquiry manifested itself, first, in his interest in machinery, technology and invention and, later, in his inquisitiveness into the rhythm and secrets of Nature. His consuming interest in Nature is echoed in the following passage where he describes the possibilities open to the painter, who at that time was primarily concerned with "religious art"—imaginary Biblical portraiture and themes :

The painter can call into being the essence of animals of all kinds, of plants, fruits, landscapes, rolling plains, crumbling mountains, fearful and terrible places which strike terror into the spectator; and again pleasant places, sweet and delightful with meadows of many-coloured flowers bent by the gentle motion of the wind which turns back to look at them as it floats on; and then rivers falling from high mountains with the force of great floods, which drive down with them uprooted plants mixed with rocks, roots, earth, and foam, and wash away to its ruin all that comes in their path; and then the stormy sea, striving and wrestling with the winds which fight against it, raising itself up in superb waves which fall in ruins as the wind strikes at their roots.

It is Sir Kenneth Clark's belief that Leonardo was one of the greatest draughtsmen the world has ever seen and that his intellectual virtuosity stemmed directly from his ability to draw so well. His genius as an artist, that is to say, set in motion his other intellectual endowment. With this opinion one can fairly agree for Leonardo's success as a scientist and geographer is linked with his ability to express pictorially and accurately the various manifestations of Nature which came under his scrutiny. The possession of a truly extraordinary optical mechanism gave him abnormal power of penetration and enabled him to perceive quickly, clearly and accurately such momentary happenings as the flutter of a wing, the tumble of rushing water, the flickering of light, which are denied to people of normal vision.

The interest which Leonardo displayed in geography grew greater as he grew older. During his seventeen years' sojourn at the Milanese court he made various excursions into the realm of geography and when, in 1499, Ludovico was driven from his duchy Leonardo went to Venice where he seems to have spent much of his time studying cosmography. The following year he returned to Florence still enthralled by geographical

studies, for he wrote seeking information about the tides in the Black and Caspian Seas. In 1502 Leonardo was engaged by Cesare Borgia as his chief military engineer and in this capacity journeyed through central Italy making surveys and drawing maps. 1504 saw him back in Florence. There followed further periods of service in Milan, Rome and France. In 1514 he was invited to retire in France where Francis I placed the castle of Cloux at his disposal and here, until his death in 1519, Leonardo lived, delving with unabated vigour into the mysteries of Nature.

Leonardo lived at the threshold of the modern era and his cosmographical views occupy an intermediate position between the geocentric and heliocentric cosmogonies. Leonardo hinted at a heliocentric view of the world—"The sun does not move", he observed—and regarded the earth as a planet, denying it any privileged position in the universe. The idea of axial rotation and of the earth's revolution around the sun is nowhere explicitly stated but, as Professor Oberhummer said, "it evidently occupied his thoughts, so that, with Nicholas Cusanus, we must count him among the forerunners of Copernicus". Leonardo strongly supported the view that the earth is round. In this he was by no means alone, since, though rejected by the Church, it was widely held by many scholars of his generation such as Toscanelli, whom Leonardo knew. He interpreted correctly the dim illumination of the moon when, during its early phases, only a thin crescent is brightly shining; it was due, he said, to "earthshine".

Leonardo made sustained studies in physical geography. Sea level, he averred, was the geographer's datum line; no solid land lay below sea level and all surface water flowed to the sea since none could possibly lie below the level of the sea. In this, of course, he was mistaken, since a number of depressions and inland 'seas' do lie below mean sea level, though the general principle is sound enough and had its value in relation to contemporary thought. He conceived mountains as accumulations of river alluvium (how near the truth he was!) and attributed their height to a fall in the level of the ocean. He recognized the principle of rock stratification and noted that the strata were often folded. The Alps were a source of endless fascination to him and his studies of Alpine scenery are echoed in the artistic reproduction of mountain forms in his paintings, as for instance in the backgrounds of the "Mona Lisa" and "The Virgin of the Rocks". Though he has few observations to make upon volcanic activity—which is rather

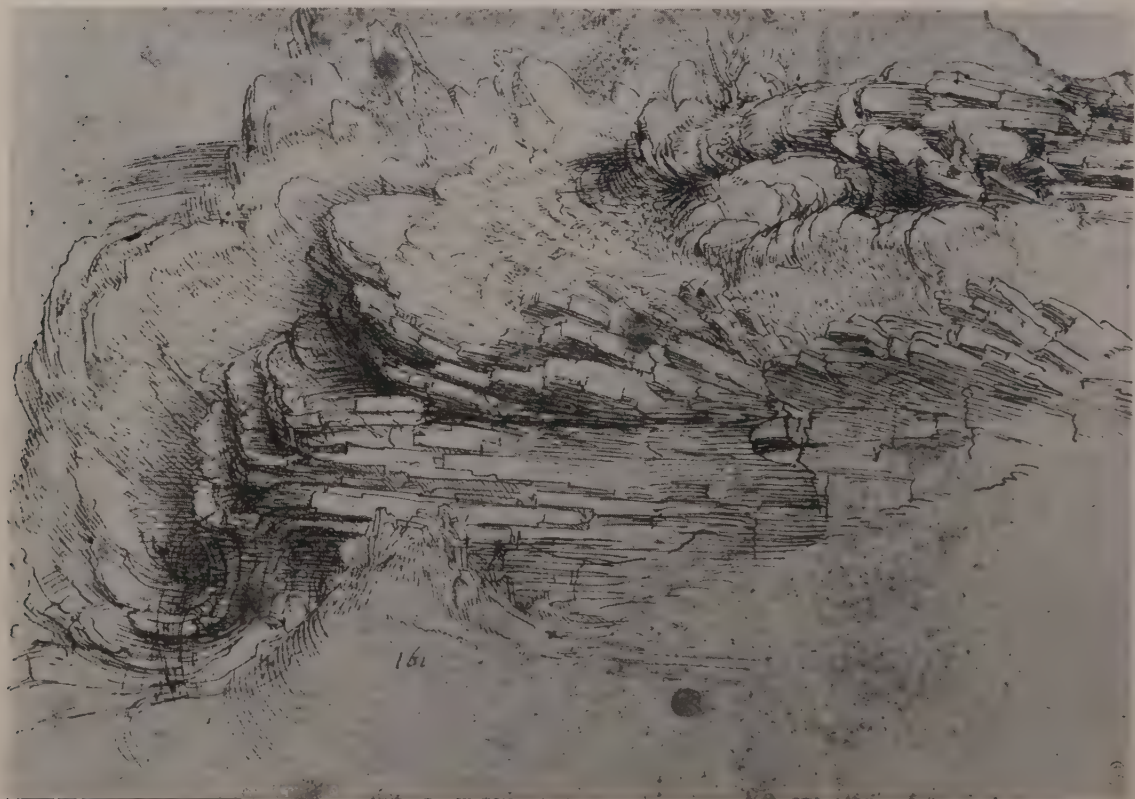
surprising considering its frequent occurrence in Italy—he opined that earthquakes resulted from tension within the earth's crust caused by seeping water being converted into explosive steam by the internal heat. Later, he modified this idea and attributed earth tremors to air, locked in the bowels of the earth, being compressed by the collapsing of subterranean cavities. As regards surface relief he recognized the agents of erosion and seized upon running water as the most effective of the modelling agents, attributing the major topographical features to the erosive work of rivers :

The sculpture of the mountains is effected by rivers which are formed from rain, snow, hail and ice melted by the summer sun. When melted, the water is collected in many small brooks, which gather from all sides into large streams and grow larger as they advance, until they meet in a great ocean. During their course they undermine the one bank and deposit their load on the other, until they have traversed the whole breadth of the valley. But this is not all; they tear away the bases of the valley slopes which then fall into the rivers and dam up the

valley. As though in revenge they close the way to the river and convert it into a lake, where the hemmed-in water moves exceedingly slowly, until the obstruction formed by the landslide is again demolished by the water.

This passage might conceivably be taken from a textbook of modern geomorphology. He noted the work of ice and even foreshadowed the modern theory of ice and snow acting as a protective blanket to the land surface : "The heights of mountains are more eternal and more enduring when they are covered with snow during the whole winter." He recognized soil erosion, noting how it was frequently accelerated by cultivation. The ultimate end of the processes of erosion, Leonardo affirmed, was the complete degradation of the land masses. The detrital material carried by the rivers was deposited in the sea, resulting in the extension of the coastline seawards and the gradual filling up of marine depressions. The origin of the Plain of Lombardy he correctly explained as being merely an arm of the sea which had become silted up. He forecast that a similar fate awaited the whole Adriatic by a continuation of this

An ink and chalk drawing which reveals the keen observation that Leonardo brought to bear on the stratification of rocks, at the time when he was at work constructing canals in and around Milan





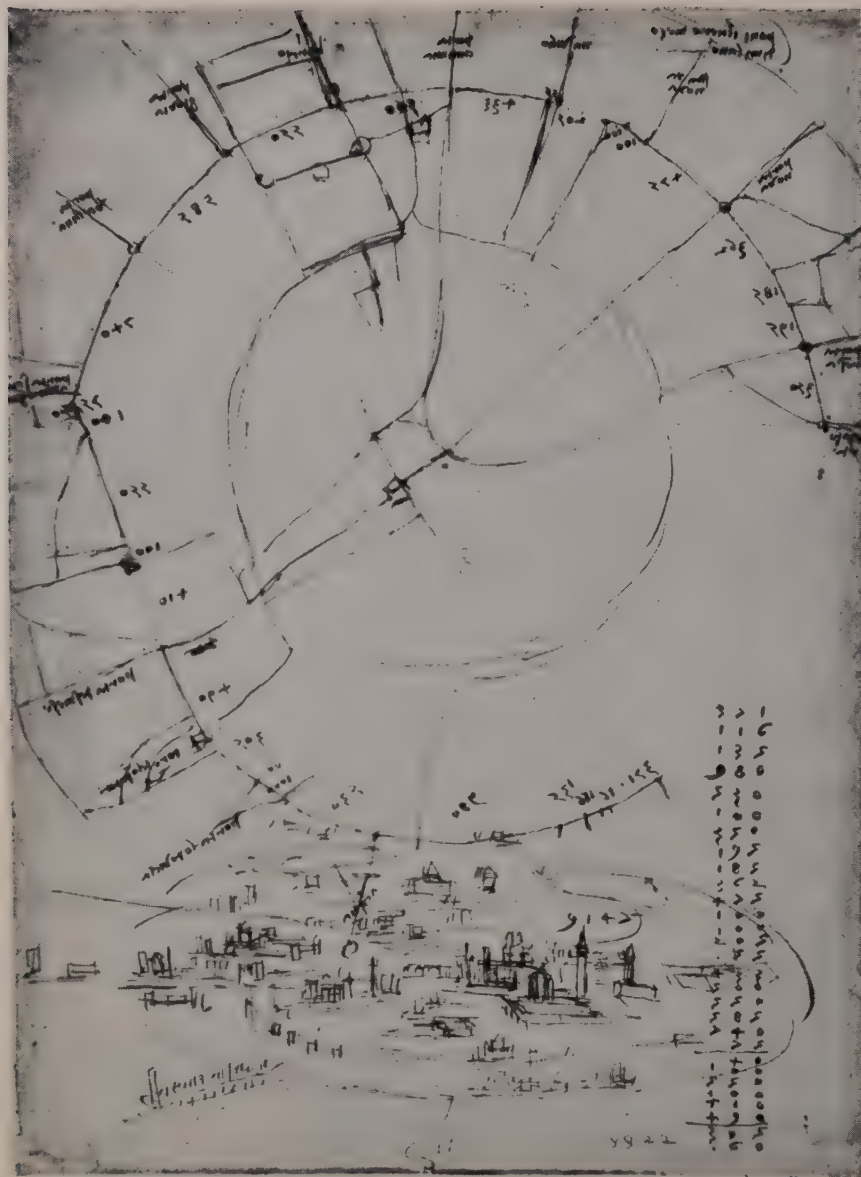
By courtesy of the
Trustees of the
National Gallery

Few of Leonardo's contemporaries depicted rocks as well and as accurately as he did in his paintings of "The Virgin of the Rocks". But later on, as his interests became more scientific, one finds that rocks in his drawings are no longer scenic details but part of the earth's structure

process. Leonardo recognized the dynamic in Nature; even the mountains and rocks which appeared so solid and changeless were, he realized, rotting before his very eyes. The "everlasting hills" were a mere myth. The continual state of flux, the creative cycle of Nature, were patent to his inquiring mind.

Amongst Leonardo's various commissions was the construction of canals in northern Italy. The excavations brought to his notice the stratification of the rocks. Though he wrongly conceived rocks as being solely of

sedimentary origin, his observation of the rock layers with their fossilized remains led him to the study of fossils and in his conclusions about them he was correct. The origin of fossils was a subject of wild and fantastic guesswork at that time; indeed, opinion as to the nature and origin of fossils varied widely right down to the 18th century. Fossils were variously interpreted as freaks of Nature, as creatures formed at Creation but never invested with life, as organisms which had grown in the ground through spontaneous



From the Codex Atlanticus, by courtesy of the Ambrosiana, Milan

While working in Milan Leonardo sketched out plans for a new city. A bird's-eye view of the existing city, with the cathedral in the centre, accompanies a rough town-plan showing the position of the gates

generation, as mineral formations or as evidence of the Deluge. Leonardo dismissed these contradictory assertions and confidently, and correctly, declared them to be the remains of marine organisms of earlier ages which had become petrified. He sarcastically spurned the contemporary belief of astrological influence upon fossils and rejected any connection between them and the Flood as flatly as he rejected the myth of a universal Deluge. If the water had risen and sub-

merged all the mountains it must have covered the entire surface of the land and, he argued, if this had happened how and where could the water have flowed away? Short of some miraculous aid or divine intervention the superfluous water could not be got rid of. Since da Vinci would not countenance the miraculous and since all natural explanations failed, the world Deluge could not have taken place. In rejecting the Biblical story da Vinci was opposing ecclesias-

tical interpretation and authority—a dangerous thing to do in his time—but Leonardo's rejection vividly illustrates his rational thinking. Many of the geological notions of the Greeks, who were the first geologists, were revived by Leonardo and many of his geological ideas are surprisingly modern. He had, for example, none of the ecclesiastical inhibitions about time for he estimated the age of geological processes in hundreds of thousands of years.

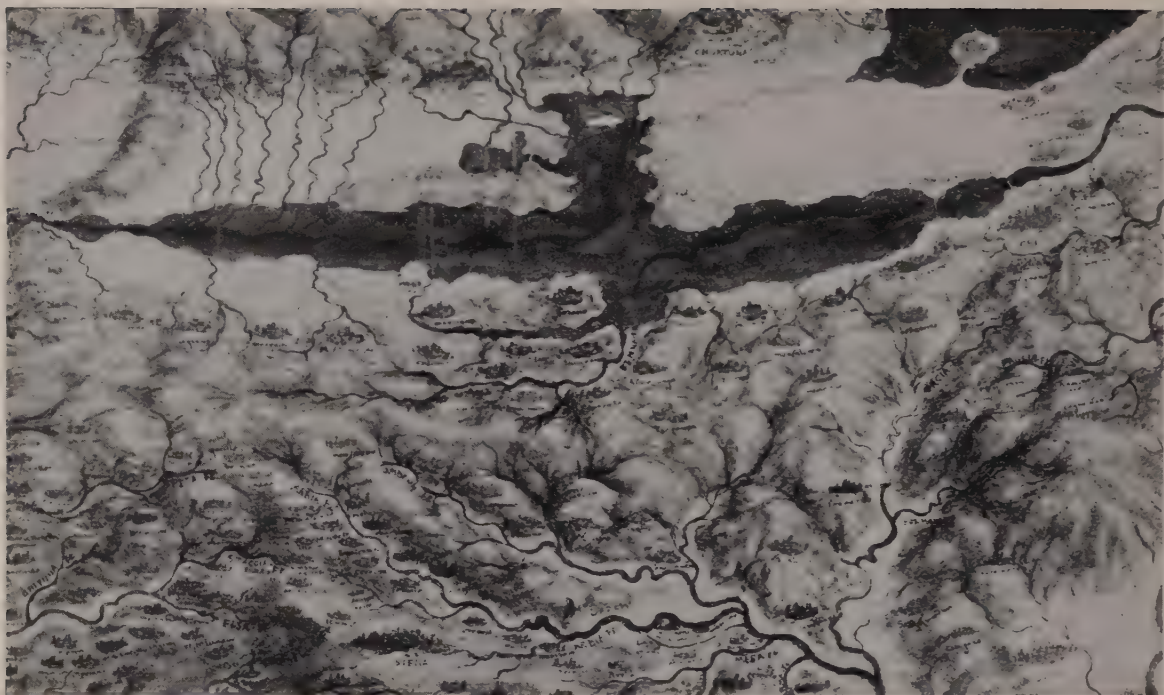
His investigations into the movements of water, which seem to have had a tremendous fascination for him, are perhaps the most im-

portant aspect of his work in geography. There is here obviously a close link with his technical studies in hydraulics. Leonardo's early ideas upon water circulation were based upon the assumption that all the water of the earth was of plutonic origin, that is, water came from the interior of the earth and coursed through the crust much as blood circulates through the human body. Later, he modified this view and accepted the atmospheric origin of water. Leonardo studied the waves of the sea and "must be regarded as the founder of the modern theory of wave motion; he was the first to perceive clearly

Shut up in Imola during a revolt, Leonardo drew this plan of the town, which not only displays his skill as a surveyor and draughtsman but is also a departure from the then normal panoramic style



*Reproduced by Gracious permission
of Her Majesty the Queen*



Reproduced by Gracious permission of Her Majesty the Queen

(Above) A detail from a map by Leonardo suggesting a drainage-scheme for the vale of Chiana in Tuscany. Much of this area has since been drained. (Below) A map of the Pontine Marshes, perhaps also intended for a drainage project. Such maps place Leonardo, as cartographer, well in the forefront of his period

Reproduced by Gracious permission of Her Majesty the Queen



the orbital motion of water particles in waves, and to compare the progression of waves with the undulations of a wind-swept cornfield" (Oberhammer). He studied also, with great care and at length, the phenomena of tides and currents. While acknowledging that the moon had some effect upon tidal oscillations he propounded a theory of his own based upon his belief in "internal waters" within the earth. Though his tidal theory was erroneous his explanation of the movements of ocean currents is, in essentials, in accord with modern views. Considering so little was known of the circulation and movements of the waters of the earth in his day Leonardo's investigations must be accepted as a major contribution to the solution of the problems relating to them and if there is no generally accepted Father of Oceanography da Vinci might well lay claim to such a title.

Leonardo's inquiries into physical phenomena range also into the study of meteorology: he sought into the cause and effect of wind and the origin of waterspouts, constructed a hygrometer to determine atmospheric humidity, studied the causes of precipitation and cloud formation and commented upon the transparency of the air and colour of the sky.

While Leonardo exhibited an admirable versatility in the physical sciences, he was also something of a cartographer. His cartographic contribution falls into three categories: a world map, large-scale regional maps and urban survey-plans.

There is in existence a sketch of a map of the world (1515 A.D.) which was drawn as the basis for a globe: it is executed in eight sectors, four for each of the northern and southern hemispheres. The attribution of this to Leonardo has, however, been disputed. His reputation as a cartographer rests more surely on a number of other maps. During his service with Cesare Borgia he travelled throughout central Italy and in his capacity as chief military engineer undertook much survey work. He mapped Lakes Annone, Lecco and Pusiano and drew six excellent maps. These maps, now preserved in the Royal Library at Windsor, are detailed local surveys carefully and beautifully executed in colour. The map of the vale of Chiana in Tuscany, here reproduced, has the waters tinted blue, the land in brown with the hills and towns drawn in perspective. The relief is emphasized by employing a shadow technique—a modern cartographical aid. The second map depicts part of the Pontine Marshes with Monte Circeo and, backing the plain, the Mountains of Terracina. Such maps were rarely found outside

Italy at that time and considering the general level of mapping are good examples of Leonardo's scientific approach to cartography.

Leonardo's maps scarcely warrant him an important place in the history of cartography but his town plans, based upon his own accurate surveys, are in another category. There are few town plans earlier than the 16th century and usually, as for several centuries later, they are more in the nature of perspective views than accurate ground plans. Leonardo's plan of Imola—one of a series executed for Cesare Borgia—is strictly geometrical and based upon an accurate survey of the town. The town walls, streets and buildings are accurately delineated. Leonardo's manuscripts contain various other sketches and plans, like the one of Milan reproduced here. When, in 1485, the plague struck Milan he conceived the idea of building a new city, a city planned to relieve congestion and secure sanitation. To this end he drew a ground plan and elevation of the city. Among his suggestions for relieving metropolitan congestion were included satellite towns, on the lines of modern garden cities, separate roadways for pedestrian and vehicular traffic, double-decker streets for the busier thoroughfares, and the standardization of workers' houses. In his proposals to Ludovico Sforza he asked to be allowed to "separate this great congregation of people who herd together like goats on top of one another, filling every place with foul odour and sowing seeds of pestilence and death". Leonardo gave much thought to the problem of sewage disposal, recognizing its relationship with public health, and drafted a project for the sewage system of Urbino. City planning appears to have had a particular interest for him but Lewis Mumford (*The Culture of Cities*) concludes that in spite of his many "pregnant suggestions, his contributions to the art of the city remain poor and meagre compared with his extraordinary zeal in improving the art of fortification and assault".

This short chronicle of Leonardo's studies in geography does scant justice to the soaring genius of the man but from our immediate standpoint it demonstrates quite clearly that in many fields of geographical study he was well ahead of his time. The misfortune was that his ideas and researches were largely unknown until recent times and so had virtually no influence upon the development of geography. Had his writings been published at the time of his death many of the erroneous notions of the old cosmography might have been discarded and the growing-pains of modern geography greatly alleviated.

People of the Pine Barrens

by DOROTHEA DIX LAWRENCE

An expert on North American folk-music and its origins in other lands, Miss Lawrence delivers lectures, accompanied by song-recitals, on her subject. Her Folklore Music Map of the United States is a lively visual embodiment of her researches, in the course of which she came to know the secluded representatives of an earlier America whom she describes in the following article

APPROXIMATELY sixty miles south of New York and thirty miles east of Philadelphia there lives a people about whom little is known and yet who at one time played an important part in the building of the United States of America. Today the pleasure-cars race back and forth from New York City on the Atlantic City highway without even knowing that at Forked River and Waretown they have only to turn inland and drive a few miles to find the remnants of a once thriving civilization. A few of them may know that there is a place somewhere near Barnegat Bay called Double Trouble where cranberries are picked and canned for the world market, but they do not know about Ascerdaton, Bull Gut, Tillie Collins' Place and Lake Bamber, nor does the speeding motorist know that hidden under the scraggly undergrowth is the remains of a railroad, and that Lebanon glass used to be manufactured and shipped on this railroad. More important than the manufacture of glass was the making, at an earlier date, of cannon-balls from iron mined in this region, to help fight the War of Independence.

The sandy soil and stunted pines have given this region in New Jersey its name of the Pine

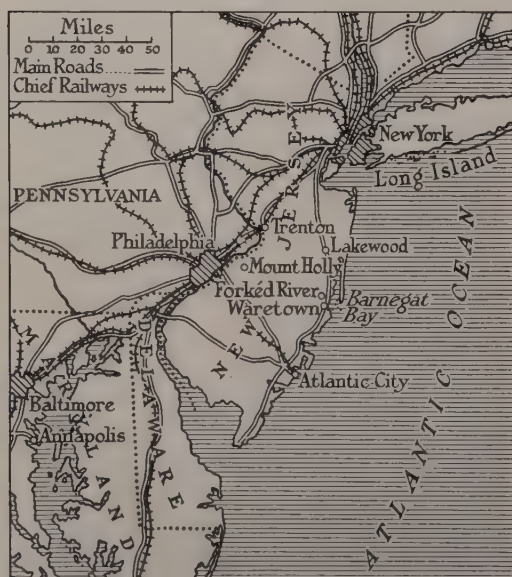
Barrens. Only in one spot have the pines ever succeeded in growing to a considerable height. Constant fires and the arid soil have discouraged the growth of vegetation. Annually blueberries and cranberries thrive protected from freezing in winter by flooding the bogs. The blooms in the spring are unbelievably lovely and everyone is busy from sunrise to sunset during the berry-picking season which follows.

Besides the berry-picking the making of charcoal was a means of livelihood hereabouts for very many years. Small quantities are still made, but berry-growing and picking, and clamming and fishing have become the chief means of support; together with a moderate amount of farming, the products of which are mainly grown for local consumption.

Barnegat Bay which borders the Pine Barrens on the east is famous for its large delicious clams. It is also of historical significance, because these Pine Barrens people believe the pirates used to bury treasure along the bay, and that many of the inhabitants of today are descended from the pirates and their captives, put ashore to shift for themselves as best they could. There are sandhills, locally called "mountains", where their descendants are believed to have lived in caves. The credence given to this tradition is undoubtedly due in part to the Spanish as well as English, Irish and Scottish names which are still locally extant and have been handed down for generations.

Another theory regarding the origin of the Pine Hawkers, Clam Diggers, Stump Jumpers and Ridge Runners, is that the steady shifting of the sands of Virginia brought these people with them. They were received by the Delaware Indians, intermarried, and many of them show the influence of the Indian strain. They are a taciturn, self-sufficient, quiet people, and many of them have high cheekbones, tawny skin, and walk on their toes which they turn slightly inwards, in true Indian fashion.

Close inbreeding has always been prevalent among the natives of South New Jersey.



A. J. Thornton



All photographs from the author

(Above) Some sixty miles from New York City and only a short distance from the Atlantic City highway is the Pine Barrens, a flat sandy region of many square miles covered with a scrub of cranberries, blueberries, pin-oak, sweet fern and a few stunted pines. Berry-picking is one of the principal means of livelihood in this strange, little-known part of New Jersey, where (right) the cranberry bushes covered with blossom in spring are a sight well worth turning aside from the highway to see





"Wherever there are people there is music": the author, in her search for the traditional folk-songs of her country, found that the Britton family, who own the finest home in the Pine Barren country, still knew—and would play and sing for her—some of the old tunes. Old Mrs Britton, standing in the doorway, is half Delaware Indian and there is a mixture of Spanish, Scottish, Irish and English as well as Indian in the blood of the "Pineys"

Illiteracy, poverty and primitive methods of sewage-disposal are apparent; but there are also fine specimens of manhood and excellent simple education to be found.

During both World Wars the Pine Barrens have furnished the United States with fine support both in the armed forces and in other work for national defence. One family, perhaps the most famous in the region, for many generations has been and still is conspicuous for its loyal services in every conflict the United States has had, including the War of Independence, the War of 1812 and the Civil War. This is the Britton family. Two of the contemporary Brittons—double cousins, that is, their mothers were sisters and their fathers were brothers—served in World War II, one in the Pacific, and the other in Africa.

The Britton family are conspicuous for many other things too, among them the preservation of the music of these retiring folk. For many years, in fact until 1939, it was emphatically stated that no music existed in this region; but I believe that wherever there are people, there is music in some form or other.

After many fruitless attempts, I got into touch with Bill Britton who was at the time employed at the yacht basin in Forked River. He disclosed the fact that he did know some very old tunes which his father and grandfather had passed on to him. After much coaxing he agreed to have his cousin Walt Britton and their friend Merce Ridgway meet with us, and give me an idea of the pieces he had in mind. Bill plays a fiddle, dances, sings a bit and narrates. Walt plays, with his fingers, a five-stringed banjo of the type invented by Joe Sweeney in the United States in 1842. Merce—this is a short way of saying Maurice—plays a guitar, and has a sweet baritone voice.

Such sagas as "Mount Holly Jail" and "The Murder of Wainwright" revealed the thinking of these people. Mount Holly is a town still in existence, and "once upon a time long ago" it is reputed to have had a jail where the lice were "as big as young quail" and "the food was served in an old slop pail". Also, the warden would take away the miscreant's clothes, sell them, and get drunk on the proceeds from the sale in the sheriff's hotel.

The height of mountains is relative; the highest point in the Sand Mountains of the Pine Barrens, Isaac's Hill, is only 340 feet: the view from its top across the "plains" of southern New Jersey



Lake Bamber inspired a piece about itself and a fandango, which with its original name, Lake Ferrago, has helped confirm the idea that Spaniards settled there a couple of hundred years ago.

There are many hornpipes, reels and jigs. Two pieces, "That Great Cove Piece of Time" and "The Little Cove Piece", were undoubtedly inspired by the Great Cove and Little Cove of Barnegat Bay. Bill Britton has a gift for writing poetry, and one of his creations, "Along the Jersey Shore", gives an excellent picture of the life and thinking of the Pine Barrens. The Brittons' home, on the Lacey Road, about twenty-five miles from Forked River, is the finest in the neighbourhood and has the only well-grown pines. It is a large frame house, unpainted and well-weathered. From it one can reach the Sand Mountains with a guide. From the top of Isaac's Hill, the highest point in the Sand Mountains and for forty miles around, there is a superb view of the ocean and Barnegat Bay. The actual height is only about 340 feet, but in a country so flat and devoid of variation this, by comparison, is a real altitude. The entire area is famous for its health-giving properties. Lakewood is one of the most famous health resorts in the world. It is mild there in the winter, and the pine-scented air is believed a cure for asthma and pulmonary troubles.

Throughout the Pine Barrens folk-yarns abound. Here is one which refers to the heavy rains that frequently add to the dreariness of the region. "Old Man Collins", husband of the famous Tillie Collins, after whom the town was named, drove into town to get supplies. He lingered longer than he had anticipated and for hours a heavy rain fell. When Collins started for home, the horses found it slow going on the wet, sandy road, and the reins started to stretch; in fact, they stretched so badly that Collins decided to leave his seat on the wagon and ride one of the horses. Soon the wagon was far behind and finally when Collins turned into the barn, the wagon was out of sight. He was feeling drowsy and a bit confused from all the good spirits he had consumed. Figuring he was pretty wet and there was not much he could do about the wagon, he went to bed. In the morning when he awoke he saw the sun was shining brightly and the rain had disappeared. Remembering the wagon he rolled out of bed immediately and started to dress. As he did so he glanced out of the window, and there was the wagon standing in the yard. You see, Collins had overslept, and the sun having been up for hours, and very hot, had dried out the

reins. Naturally they had shrunk, and had pulled the wagon up the road a mile or so, and right into the yard!

Bill Britton's uncle had a reputation for stories, in fact he prided himself on being the biggest and most successful prevaricator in the world. One evening when a group of the neighbours had been enjoying a glass together, the subject of chimneys came up and Britton "lowed as how" he had "the best drawin' chimney anywhere 'round". Why, he said, "one evenin' the door blowed open and in come the cat. That cat tried to walk acrost the room but the draft from the chimney just drawed that cat right acrost the room, in fact every hair was rizzed, and turned over the wrong way, pointin' t'ards the chimney. That cat tried to stop but nary a chance did it have and right up the chimney it went." Britton said: "I runned to the door and the last I ever seed of that cat it was going straight acrost the sky to the north."

Historic spots abound in the Pine Barrens of New Jersey and Dover Forge is one of them. It is on Holloway's place right by one of the great cranberry bogs. Cannon-balls were made at Dover Forge to fight the War of American Independence. Near this spot is the only beaver dam known in the district. It is looked upon by the natives with great interest, and no-one seems to know from whence the beavers came.

Homes are never much closer together than a quarter of a mile and often a much greater distance intervenes. Ridge Runners are the folks who live on the ridge which runs down the central part of New Jersey near Trenton. Stump Jumpers are the hardy souls who live on the stunted undergrowth running along the eastern side of the ridge. Pine Hawkers live still further east and, perhaps, partly derive their name from the beautiful Cooper's Hawk of which many can be found in this region. Clam Diggers live along Barnegat Bay on the eastern shore of New Jersey, facing the strip of land which borders the Atlantic Ocean and is at this point the most easterly portion of the State.

In the 18th century Mahlon Stacey wrote back to England that this new country in which he had settled was indeed a "rich" land. He predicted a great future for the southern portion of New Jersey. Though obscured, now, by the growth of other parts of the State there is still a sense of greatness about the Pine Barrens and to this, perhaps, its quiet, self-contained, self-supporting, unobtrusive people owe their continued strength and independence.